IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DN 801001   )   Group Art Unit: 2171

In re the Application of:)   Examiner: Cam-Linn Nguyen

Jeffrey P. Szmanda   )

Serial No.: 09/982,640   )

Filed: 10/18/2001   )

For: A Method of Retrieving Advertising)

Information and Use of the Method   )

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APPEAL BRIEF TRANSMITTAL

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2. Appeal Brief (49 pages, including claims Appendix)

3. Specification (as amended) with line numbers and page numbers.

4. Drawings (9 pages)

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Charles R. Szmanda

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Dated this 9th day of May, 2006
Respectfully submitted,

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Appeal Brief

1. THE REAL PARTY IN INTEREST

The real party in interest in this appeal is Madison Avenue Tools, Inc. Ownership is established by assignment.

2. RELATED APPEALS AND INTERFERENCES

Appellant knows of no related appeals and interferences in this case.

3. STATUS OF CLAIMS

Claims 1-43 were originally filed with this application. Claim 43 was cancelled and claim 44 was added in a preliminary amendment prior to examination on the merits. Claims 1-42 and 44 are rejected under 35 U.S.C. §102(b). Claims 1-10 and 39-42 and 44 are rejected under 35 U.S.C. §102(e) and Claims 11-38 are rejected under 35 U.S.C. §103(a). Appellant hereby appeals the rejections of claims 1-42 and 44.

4. STATUS OF AMENDMENTS

There have been no amendments filed subsequent to receipt of the final office action. However, amendments were entered before final office action. A copy of the specification with page and line numbers and amended drawings is included in an appendix for the convenience of the Board.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The following is a concise explanation of the subject matter defined in each of the independent claims involved in this appeal pursuant to the requirements of 37 C.F.R. §41.37(c). Claims 1, 11, 25, 39 and 42 are the independent claims under appeal. The application contains no means plus function or step plus function claims.

Claim 1 (as disclosed in the specification, pages 12-13, lines 26-29, 1-3) provides a method of supplying advertisement information to a user searching for desired information within a data network, comprising the steps of *receiving, from the user, one or more search rules comprising facts about an advertisement*; accessing a database comprising *details of a plurality of advertisements*; using a search engine to apply *said search rules* to said database; and reporting, to the user, results comprising a subset of the contents of *said database*.

As disclosed in the specification (page 19, lines 2-7), Figure 1 illustrates the operation of the embodiment of Claim 1. Shown are (1) an advertisement database comprising details of a plurality of advertisements, (2) a user interface with an input portion and an output portion, (3) a search engine, capable of accepting input from the user, querying the advertisement database and (4) reporting a single result or a plurality of results to the user via the user interface wherein the results comprise a subset of the advertisement database.

"Facts about an advertisement" as outlined in the specification (page 15-16, lines 22-29, 1-9) can [be expressed as] "keywords or phrases describing the advertisement in some way, brand names or portions

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thereof, "sound-alike" or misspelled words capable of being interpreted by the search engine and applied to the database, a description of color schemes used in the advertisement, a description of the music heard in the advertisement, a description of the linguistic elements employed by the advertisement, a description of the ambient environment depicted in the advertisement, a description of the user's subjective impression after experiencing the advertisement, a description of visual queues perceived in the advertisement, a description of the plant, animal or human model or models used in the advertisement, a description of the cartoon or caricatured models used in the advertisement, a description of the item advertised, a description of the social situation depicted in the advertisement, a description of the tactile sensations conveyed by the advertisement, a description of the olfactory sensations conveyed by the advertisement, a description of the taste sensations presented by the advertisement, a description of the user's perception triggered by a sensory stimulus or a plurality of stimuli conveyed by the advertisement or a description of the user's impressions of the artistic elements presented in the advertisement or other descriptors characteristic of the advertisement."

"*Details of a plurality of advertisements*" that would be contained in the database to be searched are disclosed in the preceding paragraph. In addition, the specification (pages 3-12) discloses "details of a plurality of advertisements" that might be contained in the database.

Claim 11 (as disclosed in the specification, page 13, lines 14-23) provides a method of supplying advertisement information to a user searching for desired information within a data network, comprising the steps of: *querying the user* to obtain one or more search rules comprising *facts about an advertisement*; accessing a database comprising *details of a plurality of advertisements*; using a first search engine to apply *said search rules* to *said database* to obtain results comprising a first subset of the contents of said database; receiving from the user one or more keywords; using said keywords and a second search engine to query said first subset; and reporting, to the user, results comprising a second subset of the contents of said database, *wherein said second subset is smaller than said first subset.*

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As disclosed in the specification (page 19, lines 8-28), Figure 2 shows this invention with the search engine implemented to eliminate from consideration in an iterative fashion those advertisement records that do not meet the search criteria. As before, Figure 2 shows, (1) the advertisement database and (2) the user interface. Data from (1) are copied initially into (5) an ad list buffer. The user is queried by (6) for an input rule, which is then passed to (7) a decision point. If the rule, input by the user, can eliminate one or more records in the ad list buffer, a command is passed to (8), which deletes items based on the input rule. If the rule, input by the user, can not eliminate a record in the ad list buffer, a command is passed to (11), which increments an index denoting the number of questions that have been asked, generates a new question based on the data in the ad list buffer and passes the new question back to (6), which reinitiates the process with a new query to the user. Once at least one record is deleted from (5) by (8), a query is made by (9), a decision point, to determine whether there is only one item left in the ad list buffer. If so, a single result has been generated. That result is communicated by (10) to the user interface and passed to the user. If not, an argument is communicated to (12) another decision point, which determines whether there are no further questions to be asked of the user. If there are no further questions, (13) passes the remaining results to the user via the user interface, (2). If there are more questions to be asked, a command is passed to (11), which increments an index denoting the number of questions that have been asked, generates a new question based on the data in the ad list buffer and passes the new question back to (6). Thus, the process is iterated until a single record remains in the ad list buffer or there are no further questions.

As disclosed in the specification (page 20, lines 1-3), Figure 3 is similar to Figure 2 except that the multiple results are not reported to the user at (13). The process, (14), requests from the user, a free-form keyword via the user interface. The new keyword is passed to the process of Figure 4.

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As disclosed in the specification (page 20, lines 4-23), the process of Figure 4 uses keywords entered in freeform at (14) that [are] tested to determine whether it matches any of the items in (15) the redacted ad list buffer. The output of (14) is first passed through (16) a decision point that determines whether all of the keywords from (14) have been exhausted. If there are no keywords pending, the contents of (15) are passed to (23) and reported to the user via the user interface. If at least one keyword is pending, it is passed to (17) a decision point which queries whether the pending keyword matches any of the items in the ad buffer. Upon finding one or more matches, the redacted ad list buffer (15) is redacted further by removing those advertisement records that do not match the pending keyword. If (17) determines that no match with the pending keyword was found, a new keyword is requested at (14). The process of (18) passes to (19) a decision point that determines whether the ad list buffer contains a single item. If the ad list buffer contains a single item, the result is reported by (22) to the user via the user interface. If no items or more than one item is contained in the ad list buffer, control is passed to (20) a decision point which determines whether the redacted ad list buffer is empty. If the redacted ad list buffer is empty, control is passed to (21) which restores the redacted ad list buffer to its condition prior to testing by the last keyword and then passes control to (14). If at (20) the redacted ad list buffer contains more than one item, control is passed to (14). Thus, the process is iterated until a single record remains in the redacted ad list buffer or there are no further keywords from the user. Elements 16-20 of Figure 4 make up the first search engine (100).

As disclosed in the specification (page 21, lines 5-21), Figure 7 A-H describes an interactive session with the advertisement retrieval program. The underlying algorithm for this session is that described in Figures 3 and 4. Figure 7(A) shows that the program makes no assumptions about the contents of the advertisement experienced by the user. In fact, the user need not even remember the name of the product or service. Figure 7(B) provides a basis for eliminating from consideration all of the advertisements in the database except those presented on television. Figure 7(C) indicates that the user further eliminates from consideration all messages such as talk shows or interviews that were not

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presented as a commercial. Figure 7(D) indicates that the advertised product is for personal use, thus eliminating from consideration all advertisements for the home, for business, for travel or for vehicle related products. Figure 7(E) indicates that the product is a prescription medication, thus eliminating all items that are not prescription medications. Figure 7(F) requests free-form input from the user indicating that the medication is for relieving pain from arthritis and a salient detail about the ad, namely, that a woman was "climbing stairs and walking fast." Figure 7(G) indicates that the system now has sufficient information to suggest the contents of a single result, which is recognized by the user. Figure 7(H) reports the single result to the user in the form of contact information.

In the instant claim, the user is *queried* to obtain one or more search rules comprising *facts about an advertisement*, in contradistinction to Claim 1 wherein such a query is contemplated but not required. Further, in the instant claim, the first search result, comprising a first subset of the database comprising *details of a plurality of advertisements*, is refined by "receiving from the user one or more keywords; [and] using said keywords and a *second search engine* to query [the] first subset".

Facts about an advertisement have been outlined supra as has a database comprising *details of a plurality of advertisements*. The first subset contains *details of a plurality of advertisements* because it is a subset of the first database and, likewise, the second subset comprises details of at least one advertisement. Claim 11 further requires that the "*second subset is smaller than said first subset.*" Logic algorithms of various search engines, used singly or in combination, so that they are the same or different, are disclosed in the specification (page 17 lines 3-23).

Claim 25 (as disclosed in the specification, page 14, lines 6-17) provides a method of supplying advertisement information to a user searching for desired information within a data network, comprising the steps of: querying the user to obtain one or more search rules *comprising facts about an advertisement*; accessing a database comprising *details of a plurality of advertisements*;

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using a first search engine to apply said search rules to said database to obtain a plurality of results comprising a first subset of the contents of said database; receiving, from the user, a first list of keywords; *generating a second list of keywords, said second list comprising keywords or phrases synonymously related to one or more keywords or phrases in said first list*; using said second list and a *second search engine* to query said first subset; and reporting, to the user, results comprising a second subset of the contents of said database, wherein said second subset is smaller than said first subset.

As disclosed in the specification (page 20, lines 24-28), Figure 5 is similar to Figure 4 except that the input of a keyword at (14) passes control to (24) which *expands the input of each keyword, if possible, to include the original keyword and its synonyms*. Thus, the process of Figure 5 is iterated until a single record remains in the redacted ad list buffer or there are no further keywords or synonyms to be tested. Elements 16-20 of Figure 5 make up the second search engine (110).

Facts about an advertisement have been outlined supra as has a database comprising *details of a plurality of advertisements*. The first subset contains details of a plurality of advertisements because it is a subset of the first database and the second subset comprises details of at least one advertisement Logic algorithms of various search engines, used singly or in combination, so that they are the same or different, are disclosed in the specification (page 17 lines 3-23).

In addition to the limitations of Claim 11, Claim 25 also requires *"generating a second list of keywords, said second list comprising keywords or phrases synonymously related to one or more keywords or phrases in said first list*; using said second list and a *second search engine* to query said first subset;"*. The generation of a second list of keywords *"comprising keywords or phrases synonymously related to one or more keywords or phrases in said first list"* is disclosed in the specification (page 16-17, lines 23-29, 1-2).

Claim 39 (as disclosed in the specification, page 14, lines 18-24) provides a method of facilitating demographic research by supplying advertisement information to a user searching for information within a data network, comprising the steps of: receiving a set of search terms *comprising words having targeted connotative significance to a particular demographic segment*; accessing a database comprising *details of a plurality of advertisements*; using a search engine to apply said search terms to said database; and reporting results comprising a subset of the contents of said database.

As disclosed in the specification (page 21, lines 1-4), Figure 6 is similar to Figure 4 except that (25) requests search terms that are targeted at a single demographic group or a subset of the demographic universe and that the process is begun with the full ad list buffer (5) initially comprising all of the records in the entire advertisement database.

The limitation "accessing a database comprising *details of a plurality of advertisements*;" has been outlined supra. This claim further recites: "receiving a set of search terms *comprising words having targeted connotative significance to a particular demographic segment*" and "using a search engine to apply said search terms to said database; and reporting results comprising a subset of the contents of said database," wherein the antecedent basis of "said database" is "a database comprising *details of a plurality of advertisements*." Appellant has defined the term "connotative" in the context of "connotative meaning" in the specification (page 9, lines 7-8): "connotative meaning is defined as that which signifies more than the literal meaning of a given word or phrase." Further elaboration was given in that paragraph. Moreover, the relationship between connotative meaning and demographics is outlined in the specification (pages 9-10, lines 8-29, 1-3).

Claim 42 (as disclosed in the specification, page 14-15, lines 25-29, 1-4) provides a method of performing demographic analysis of advertisements, comprising the steps of: (a) receiving a list of search terms comprising words having *connotative significance to a targeted demographic segment*; (b)

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accessing a database comprising *details of a plurality of advertisements*; (c) using a search engine to apply said list of search terms to said database; (d) reporting results of the search comprising a subset of the contents of said database, said results being indexed uniquely; and (e) repeating steps (a) – (d) a number of times with at least one different search term in said list, said number being sufficient to cover the desired demographic space.

The limitation "accessing a database comprising *details of a plurality of advertisements*;" has been outlined supra, as has "receiving a set of search terms *comprising words having targeted connotative significance to a particular demographic segment*" and "using a search engine to apply said search terms to said database; and reporting results of the search comprising a subset of the contents of said database," wherein the antecedent basis of "said database" is "a database comprising *details of a plurality of advertisements*." Appellant has defined the term "connotative" in the context of "connotative meaning" in the specification (page 9, lines 7-8): "connotative meaning is defined as that which signifies more than the literal meaning of a given word or phrase." Further elaboration was given in that paragraph. Moreover, the relationship between connotative meaning and demographics is disclosed in the specification (pages 9-10, lines 8-29, 1-3).

The iterative process of claim 42, described supra, allows coverage of an entire demographic space. Such iterative processes as well as indexing of results are disclosed in the specification (for example, page 18, lines 3-7).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- Claims 1-42 and 44 are finally rejected under 35 U.S.C. §102(b) as being unpatentable over U.S. Patent No. 6,098,065 to Skillen et al. ("Skillen").
- Claims 1-10 and 39-42 and 44 are finally rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 6,421,652 to Loeb et al. ("Loeb").

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- Claims 11-38 are finally rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,421,652 to Loeb et al. ("Loeb").

7. ARGUMENTS

Rejections under 35 U.S.C. §102(b) over U.S. Patent No. 6,098,065 to Skillen et al. ("Skillen")

Summary of the Skillen Reference. In brief, the Skillen reference discloses an "advertisement machine" which provides advertisements to a user searching for desired information within a data network. The "desired information" sought by the "user" in Skillen can relate to *any* subject. Indeed, the search, using the user's "search request" is a "traditional search of Internet related information in the contextual data" (column 4, lines 31-33), wherein the contextual database "typically contains information relating to the Internet, for instance, keywords associated with respective WWW site locations" (column 4, lines 11-13), in a way that would be entirely consistent with a "traditional" general internet search such as might be done with Yahoo or Lycos. Provided further by Skillen is an "associative search engine" that searches a "Product Database" (Figure 1, element 24 or Figure 2, element 42) and "selects the most logical product from its available data and then provides an advertisement insert that is *added* to the end user's search page..." (Column 4, lines 20-22, emphasis mine, drawing references deleted) in very much the same way as the "Sponsored Links" section is presented in a Google search *in addition* to the information being sought.

The following is a quotation from Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987): "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." To meet this burden of establishing a prima facie case for anticipation, the examiner must explain how the rejected claims are anticipated by pointing out where all of the specific limitations recited in the rejected claims are found in the prior art relied upon in the rejection.

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Claim 1 (with dependent claims 2, 6 and 7 argued separately, infra). Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show where Skillen discloses "receiving, from the user, a series of search rules comprising facts about an advertisement" as recited in Claim 1.

- The Examiner did not show that Skillen discloses "accessing a database comprising details of a plurality of advertisements" as recited in Claim 1.

- The Examiner did not show that the Skillen reference discloses "using a search engine to apply said search rules to said database" as recited in Claim 1.

- The Examiner did not show that Skillen discloses "reporting, to the user, results comprising a subset of the contents of said database" as recited in Claim 1.

The Examiner did not show where Skillen discloses "receiving, from the user, a series of search rules comprising facts about an advertisement" as recited in Claim 1. In the first, non final office action, dated 12 April, 2004, the Examiner alleged that Skillen discloses "receiving, from the user, a series of search rules comprising facts about an advertisement" in column 4, lines 5-6.

> **Skillen, column 4, lines 5-6:** "searches based on subject, strings, boolean [sic.], text, etc. Such input search arguments may be received from an end user..."

Clearly, "search rules comprising facts about an advertisement" are neither expressly nor inherently described in the above citation. In the final rejection under the heading Response to Arguments, dated 9 November, 2005, the examiner alleged that such matter can be found in column 2, lines 11-33; the result being a "best-fit advertisement" allegedly found in column 5, lines 50-57. The examiner then speculates: "Clearly information that the user searches for is advertising information." The specific citations on which this speculation is based are provided infra:

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Skillen, column 2, lines 11-33: "Conventional search engines, for example OpenText, provide a basis on which the methodology according to this invention may be implemented. In a particular embodiment, the invention is manifested by an advertising system including an associative search engine that may be tied into and form an integral part of the conventional search engine. When an end user accesses the conventional search engine, the associative engine of the selling system examines the user's choices and search instructions, that have been input by the user, and formulates the necessary strategy and tactics to offer products that would appeal to the end user based on his/her inputs and choices up until that point in the search. Since the process is dynamic the strategy and tactics can be continually refined and the results presented to the end user in a predictive order and fashion that relates to that end user's past preferences (either for the immediate search underway or including all prior search data stored for that user) and a contextual database. This effectively provides unobtrusive, related and useful data and options to the end user who is searching for information. The processor used for the advertising and selling mechanism can be a part of or interconnected with the search engine.

Some examples will illustrate how this invention can have…"

Skillen, column 5, lines 50-57: "…device 12 of the end user is connected through the access provider site 32 for all destinations within the Internet, a comprehensive user profile database 48 may be maintained by the associative search engine 40, about the end users preferences and previous search arguments which may be used to augment the individual search argument received with the search request to select a best fit product advertisement."

While the above citations appear to disclose the general characteristics of the "associative search engine" of Skillen, they do not address what is actually input by the user. Accordingly, the above

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citations cannot support an anticipation rejection wherein the subject claim element is "receiving, from the user, a series of search rules comprising facts about an advertisement" as recited in Claim 1. Nowhere in Skillen is it specified that the user inputs "facts about an advertisement" because Skillen's user is doing a "traditional search of Internet related information" in which any subject can be searched. Indeed, nowhere does Skillen specify exactly what the user is searching for except to say that the user is searching for "information" (column 2, line 30) or "desired information" (Abstract, column 1, lines 40, 51, 59, column 2, line 4, Claim 1). Further, it is improper for the Examiner to attempt to support an anticipation rejection based on mere speculation about what the user actually inputs, even assuming *arguendo* that the reference is ambiguous. An anticipation rejection cannot be predicated on an ambiguous reference. Rather, statements and drawings in a reference relied on to prove anticipation must be so clear and explicit that those skilled in the art will have no difficulty in ascertaining their meaning. See In re Turlay, 304 F.2d 893, 899, 134 USPQ 355, 360 (CCPA 1962).

The Examiner did not show that Skillen discloses "accessing a database comprising details of a plurality of advertisements" as recited in Claim 1. In the first, non-final office action the Examiner alleged that the subject claim element can be found in the following citation:

> **Skillen, column 4, lines 31-40:** "2) The search engine 16, having carried out a traditional search of Internet related information in the contextual data 22, passes the argument and results of the its search to the associative search engine 18 which then looks for a match in the product data 24 of the database 20. The associative search engine 18 may determine a logical product fit to the initial search argument, or it may create a logical tree analysis of possible product fits and selects a probable best product for an advertisement window to be displayed with the search results."

Skillen does not specify what is contained in the "product database." One can only assume that such a database contains information about <u>products</u>. However, Appellant's Claim 1 specifically points out

"accessing a database comprising details of a plurality of <u>advertisements</u>" in contradistinction to the matter cited supra. As was pointed out by Appellant in response to first non-final office action,

Appellant's argument in response to first non-final office action, pages 7-8, lines 23-26, 1-3.

"...advertisements may contain information other than 'product data.' Indeed, some advertisements may contain no product data (see paragraph 7 of the current application) and would therefore not be contained in the contextual or product databases of the Skillen reference but would be contained in the database of the present application. Therefore, the contextual and product databases in the Skillen reference, separately or taken together, do not contain "**details of a plurality of advertisements**" as recited in Element 2 of Claim 1."

Indeed, product data and data having "details of a plurality of advertisements" are not the same thing because advertisements for products are not the same as the products themselves. <u>It can, therefore be concluded that the Skillen reference neither expressly nor inherently describes "accessing a database comprising details of a plurality of advertisements" as recited in Claim 1</u>.

The Examiner did not show that the Skillen reference discloses "using a search engine to apply said search rules to said database" as recited in Claim 1.

The antecedent bases of "said search rules" and "said database" are "search rules comprising facts about an advertisement" and "a database comprising details of a plurality of advertisements" respectively. Logically, if either of these antecedent bases is not disclosed in Skillen, then the instant claim element is not disclosed in Skillen. Neither is disclosed in Skillen.

The Examiner did not show that Skillen discloses "reporting, to the user, results comprising a subset of the contents of said database" as recited in Claim 1.

The antecedent basis of "said database" is "a database comprising details of a plurality of advertisements". A subset of the above described database must logically contain details of at least one

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advertisement. Such would not be found in Skillen's "product database" or "contextual database" either alone or taken together.

Based on the foregoing, rejection of Claim 1 as being unpatentable over Skillen is improper and should be reversed.

Claim 11 (with dependent claims 12, 18, 19 and 23 argued separately, infra). Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show where Skillen discloses "querying the user to obtain one or more search rules comprising facts about an advertisement" as recited in Claim 11.
- The Examiner did not show that Skillen discloses "accessing a database comprising details of a plurality of advertisements" as recited in Claim 11.
- The Examiner did not show that the Skillen reference discloses "using a first search engine to apply said search rules to said database to obtain results comprising a first subset of the contents of said database" as recited in Claim 11.
- The Examiner did not show that Skillen discloses "receiving from the user one or more keywords; using said keywords and a second search engine to query said first subset" as recited in Claim 11.
- The examiner did not show that Skillen discloses "reporting, to the user, results comprising a second subset of the contents of said database, wherein said second subset is smaller than said first subset" as recited in Claim 11.

The Examiner did not show where Skillen discloses "querying the user to obtain one or more search rules comprising facts about an advertisement" as recited in Claim 11. In the first, non final office action, dated 12 April, 2004, the Examiner alleged that Skillen discloses "querying the user to

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obtain one or more search rules comprising facts about an advertisement" in column 5, lines 7-17 and column 6 lines 4-12.

Skillen, column 5 lines7-17: "Moreover, user profile data may be maintained on end user device 12 and accessed by the associative search engine 18. The profile data contains, for example, end user preferences and previous search arguments which may be used to augment the individual search arguments received with the search request to select a best fit product advertisement. The associative search engine 18 retrieves and updates the profile data on the device 12, using appropriate messages exchanged over the communications link 14. For example, the search arguments from the current search session may be added to the user profile data."

Skillen, column 6, lines 4-12: "...advertisement window on the search results. In this case, the associative search engine 40 also can utilize the maintained profile on the end user from past search sessions and/or historical data gathered on their buying habits, in the product selection processing. The associative search engine correlates the user's identity to data in the user profile database 48 which it maintains and updates with data (e.g., search argument received with search request) from the current search session."

As discussed supra, the Examiner has not shown any citation in which the user inputs "facts about an advertisement" and the above cited matter plainly, does not disclose that limitation expressly or inherently.

Claim 11 further recites "querying the user..." In neither citation is a query disclosed expressly or inherently. Indeed, no forms of the words "query," "inquiry," "question" or "interrogate" can be found in Skillen. In establishing a prima facie case for anticipation, the Examiner does not have the option of

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ignoring a claim limitation. Accordingly, no case was made that the instant claim element is disclosed in Skillen.

The Examiner did not show that Skillen discloses "accessing a database comprising details of a plurality of advertisements" as recited in Claim 11.

The Examiner presented no further arguments on this point as it pertains to Claim 11. Accordingly the above arguments pertaining to Claim 1 are incorporated by reference. Since the Examiner provided no new citations on this point, it can be concluded that the Examiner has failed to demonstrate that this element is found in Skillen.

The Examiner did not show that the Skillen reference discloses "using a first search engine to apply said search rules to said database to obtain results comprising a first subset of the contents of said database" as recited in Claim 11. This is a similar element to "using a search engine to apply said search rules to said database" in claim 1, except that, in addition to reciting a "search engine" as in Claim 1, Claim 11 further specifies a "first search engine." Accordingly, the above arguments pertaining to Claim 1 are incorporated by reference. Since the Examiner provided no new citations on this point, it can be concluded that the Examiner has failed to demonstrate that this element is found in Skillen.

The Examiner did not show that Skillen discloses "receiving from the user one or more keywords; using said keywords and a second search engine to query said first subset" as recited in Claim 11. Examiner notes the use of two claim elements in Claim 11 to refine the search result and alleges that Figure 1 of Skillen, elements 16 and 18, corresponding to the "Database Search Engine" and the "Associative Search Engine," respectively and column 4, lines 49-55, reproduced infra, disclose the two search engines of Claim 11.

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Skillen, column 4, lines 49-55: "5) The associative search engine 18 and the database search engine 16 again work together in providing refined data as in (2) above. In the case of the end user clicking on (i.e., selecting) a specific search result, the associative search engine 18 further refines its logical tree strategy and selects the probable best fit product and generates an advertisement."

However, while the two databases are generally used to refine a result, the ultimate output is not one result but at least two. One is the result of the actual user search while the other is the result of the "Associative Search Engine" searching the "Product Database." Claim 11 recites that the second search engine searches the "first subset" whose antecedent basis is the "a first subset of the contents of said database," wherein the antecedent basis of "said database" comprises "details of a plurality of advertisements. The result of the search recited in Claim 11 differs from the result of the Skillen search because the databases differ and the processes steps differ. Accordingly, no case was made that the instant claim element is disclosed in Skillen.

The examiner did not show that Skillen discloses "reporting, to the user, results comprising a second subset of the contents of said database, wherein said second subset is smaller than said first subset" as recited in Claim 11.

The antecedent basis of "said first subset" is "a database comprising details of a plurality of advertisements". A second subset of the above described database must logically contain details of at least one advertisement. Such would not be found in Skillen's "product database" or "contextual database" either alone or taken together.

Based on the foregoing, rejection of Claim 11 as being unpatentable over Skillen is improper and should be reversed.

Claim 25 (with dependent claims 26, 32, 33 and 37 argued separately, infra). Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show that Skillen discloses the elements of Claim 11, which are similar to all but one of the elements of Claim 25.

- The Examiner did not show that Skillen discloses "receiving, from the user, a first list of keywords; generating a second list of keywords, said second list comprising keywords or phrases synonymously related to one or more keywords or phrases in said first list" as recited in Claim 25.

The examiner lumped claims 11 and 25 together as if they were undifferentiated. In fact they are distinct. Nevertheless, there are common elements.

The Examiner did not show that Skillen discloses the elements of Claim 11, which are similar to all but one of the elements of Claim 25. Those arguments are incorporated here by reference.

The Examiner did not show that Skillen discloses "receiving, from the user, a first list of keywords; generating a second list of keywords, said second list comprising keywords or phrases synonymously related to one or more keywords or phrases in said first list" as recited in Claim 25. The Examiner appears to have ignored this claim element; having offered no showing in any office communication that such a feature can be found in the Skillen reference, despite Appellant pointing out the omission in his response to first non-final office action (pages 19-20, lines 25-27 and 1-19). However, in making a prima facie case for anticipation, the Examiner does not have the option of ignoring a claim element. Accordingly, the Examiner has not met the burden of establishing a prima facie case for anticipation with respect to the instant claim element.

Based on the foregoing, rejection of Claim 25 as being unpatentable over Skillen is improper and should be reversed.

Claim 39. Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show that Skillen discloses "receiving a set of search terms comprising words having targeted connotative significance to a particular demographic segment" as recited in Claim 39.

- The Examiner did not show that Skillen discloses the elements of Claim 1, which are similar to all but one of the elements of Claim 39.

The Examiner did not show that Skillen discloses "receiving a set of search terms comprising words having targeted connotative significance to a particular demographic segment" as recited in Claim 39. In the first non-final office action in which this claim was rejected, dated 12 April, 2004, the Examiner alleges that the following passage describes the instant element:

> **Skillen, column 2, lines 44-49:** "In addition to the search criterion, as users interact with the advertising system, it will continue to compile preference data (e.g. a list of keywords) for each user. All preferences, for example, can be left in a type of default mode or even presented to the user for him/her to edit and re-prioritize in order to look for diversity or alternatives. The..."

However, there is no indication in the cited passage of any connotative significance being attached to the search criterion or to the profile activity. Indeed, Skillen fails to use any form of the word "connotative" in the reference. This was pointed out in Appellant's Request for Reconsideration, dated 9 February, 2006 (pages 3-4 lines 19-23, 1-3) wherein it was also pointed out that the Examiner made no response to

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arguments in Appellant's first office action. In the Examiner's advisory action, dated 2 March, 2006, the Examiner alleged that "the term 'connotative' has the meaning of argument, according to the online dictionary." Evidently, the Examiner declined to honor Appellant's request (Appellant's Pre Appeal Brief Request for Review, dated 9 March, 2006.) for a proper citation of "the online dictionary" including the publication date, wherein is recited "'connotative' has the meaning of argument."

Be that as it may, Appellant asserts his right to be his own lexicographer under In re Paulsen, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) (inventor may define specific terms used to describe invention, but must do so "with reasonable clarity, deliberateness, and precision"). As pointed out supra, Appellant has defined the term "connotative" in the context of "connotative meaning" in the specification (page 9, lines 7-8): "connotative meaning is defined as that which signifies more than the literal meaning of a given word or phrase." Further elaboration was given in that paragraph. Moreover, the relationship between connotative meaning and demographics is outlined in the specification (pages 9-10, lines 8-29, 1-3). The concept of "connotative" meaning, as defined by Appellant, simply does not appear in the Skillen reference.

Further, the examiner's citation wherein is described "preference data (e.g. a list of keywords) for each user" entirely contradicts meaning of the phrase "particular demographic segment" as recited in Claim 39. In this context, a "demographic segment" represents a population of individuals, distinguished by some common characteristic such as age range, nationality, race, first language, sex and so on. In contrast, the Examiner's citation describes "preference data (e.g. a list of keywords) for each user." Indeed, the word "demographic" does not even appear in Skillen. Not only does the Examiner's citation fail to pertain, it describes the opposite of what is recited in the instant claim. Therefore, the Examiner's citation cannot support an anticipation rejection.

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The remaining elements of Claim 39 are similar to those of Claim 1. Arguments demonstrating that the Skillen reference does not disclose those elements are incorporated herein by reference. In particular, Claim 39 further recites: "accessing a database comprising details of a plurality of advertisements; using a search engine to apply said search terms to said database; and reporting results comprising a subset of the contents of said database." None of these elements is disclosed in Skillen.

The examiner's arguments are deficient and incomplete. Based on the foregoing, rejection of Claim 39 as being unpatentable over Skillen is improper and should be reversed.

Claim 42. Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show that Skillen discloses the elements in common with Claim 39, namely "(a) receiving a list of search terms comprising words having connotative significance to a targeted demographic segment; (b) accessing a database comprising details of a plurality of advertisements; (c) using a search engine to apply said list of search terms to said database."
- The Examiner did not show that Skillen discloses "(d) reporting results of the search comprising a subset of the contents of said database, said results being indexed uniquely."
- The Examiner did not show that Skillen discloses "repeating steps (a) – (d) a number of times with at least one different search term in said list, said number being sufficient to cover the desired demographic space."

The examiner lumped claims 39 and 42 together as if they were undifferentiated. In fact they are distinct. Nevertheless, there are common elements. Examiner's citation quoted in the arguments for Claim 39 was also cited against Claim 42. The same arguments of Appellant apply, namely, "targeted connotative significance" is nowhere disclosed in Skillen; neither is the recitation of a "particular

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demographic segment. Appellant incorporates those arguments by reference. Arguments for elements (b) - (c) are the same as those for Claim 1 and are incorporated by reference.

The Examiner did not show that Skillen discloses "(d) reporting results of the search comprising a subset of the contents of said database, said results being indexed uniquely." The indexing feature was ignored by the Examiner in every office action; nowhere was it even mentioned. In establishing a prima facie case for anticipation, the Examiner does not have the option of ignoring a claim limitation. Accordingly, no case was made that the instant claim element is disclosed in Skillen. In addition, reference is made in the instant claim to "a subset of the contents of said database," wherein the antecedent basis of "said database" is "a database comprising details of a plurality of advertisements." Based on arguments given supra, no such database occurs in Skillen.

The Examiner did not show that Skillen discloses "repeating steps (a) – (d) a number of times with at least one different search term in said list, said number being sufficient to cover the desired demographic space." This feature was also ignored by the Examiner in every office action. In establishing a prima facie case for anticipation, the Examiner does not have the option of ignoring a claim limitation. Accordingly, no case was made that the instant claim element is disclosed in Skillen.

The examiner's arguments are deficient and incomplete. Based on the foregoing, rejection of Claim 42 as being unpatentable over Skillen is improper and should be reversed.

Claims 2, 7, 12, 19, 26 and 33. These are dependent claims. Accordingly, they will have all of the limitations of the claims from which they depend. However, these claims are being argued separately because they all commonly recite "the user experienced said advertisement previously" and because the Examiner's argument appears to be facially improper.

Examiner's first non-final office action (page 4, lines 15-19): "Because the search request includes 'desired information' (col. 1 lines 42-43), therefore, the user must experience with the advertisement or must see/know and show an interested in it in order to make the request."

Nowhere in Skillen is experience with an advertisement disclosed. In fact, the word "experience" does not even appear in Skillen. Further, there is no requirement in the Skillen reference for the user to perform any search based on prior experience. Still further, "desired information" does not appear in independent Claim 1 and appears only in the preambles of independent Claims 11 and 25. As such, the phrase "desired information" cannot be cited as a claim limitation, whether or not it appears in Skillen.

Examiner's second final office action (page 9, lines 13-17): "Referring to Page 4 of the Remark, applicant stated that there are numerous ways for the user experiences and this experience allows the user to perform the search. In the instant reference (Skillen), also allow the user to retrieve information in the advertising system using user preferences or the history of searching. Clearly, these are also ways for user to experience with the advertised item in order for the user to search for such item."

Examiner appears to be under the impression that the Skillen reference describes a means of searching only advertisements. This is simply not true. Rather, the Skillen reference describes a way in which advertisements are provided to a user searching for *anything*. The user may not even *want* the advertisements but must tolerate them in exchange for the ability to use the search engine. In any event, the advertisement is presented to the user in addition to his search result (Skillen, column 4 lines 19-25) after the search is made, not before. Prior experience with an advertisement is, therefore, not required to make a search using the written description of Skillen.

Based on the foregoing, the rejection of Claims 2, 7, 12, 19, 26 and 33 is not supported by the Skillen reference. These rejections are therefore improper and should be reversed.

Claims 6, 18 and 32. These are dependent claims. Accordingly, they will have all of the limitations of the claims from which they depend. However, these claims are being argued separately because they all commonly recite "said user is a customer" and because these claims were improperly rejected for lack of clear statutory basis. The Examiner's rejection was set forth as follows:

> **Examiner's first, non-final office action, page 5, lines 13-20:** "See Fig. 1, the end user can be any type of user. In addition, the phrase "user is a customer" is considered as nonfunctional descriptive material (See MPEP, section 2106 section VI), and cannot render nonobvious an invention that would otherwise have been obvious. If the prior art suggest that a user is an en [sic.] user, merely choosing a user is a customer would be presumed to be well within the level of ordinary skill in the art at the time the invention was made. The difference between the prior art and the claimed invention is simply a rearrangement of nonfunctional descriptive material."

While the above rejection was nominally an anticipation rejection under 35 USC §102(b), The Examiner's discussion appears to have morphed into a rejection under 35 USC §103 for obviousness. Nevertheless, the rejection fails both as a case for anticipation and as a case for obviousness.

Skillen's end user is not necessarily a customer and, as The Examiner notes, "can be any type of user". Indeed, the word "customer" appears in Skillen one time but not in the context that identifies the user as a customer. Under principles of inherency, when a reference is silent about an asserted inherent characteristic, it must be clear that the missing descriptive matter is <u>necessarily</u> present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Continental

Can Co. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). The Examiner's remark that the user "can be any type of user" appears to eviscerate the inherency argument.

There is no discussion about whether or how the reference would need to be modified so as to support an obviousness rejection. A rejection for obviousness is, therefore, facially improper.

Moreover, it is argued that "user is a customer" is entirely functional because a different result would very likely obtain if the user were an advertiser or a competitor, for example.

Failure to present a prima facie case for either anticipation or obviousness renders the present rejection improper. The rejection of the instant claims should be overturned.

Claims 23 and 37. These are dependent claims. Accordingly, they will have all of the limitations of the claims from which they depend. However, these claims are being argued separately because they both commonly recite "the algorithm of said first search engine is the same as the algorithm of said second search engine" and because these claims were improperly rejected for having language that was not even in the claims. The Examiner's rejection was set forth as follows:

> **Examiner's first non-final office action, page 5, lines 1-4:** "As per claim 4, 9, 14-16, 21-23, 28-30, 35-37, 41, 43, 'The algorithm of said search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning' See col. 4, lines 14-25."

> **Skillen, column 4, lines 14-25:** "The associative search engine 18, in accordance with the present invention, may contain rule based software algorithms or non-precise techniques, such as, fuzzy logic that can correlate a search argument derived from the user and changes in the argument during a single session, to particular product data within the product database 24. The

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associative search engine 18 selects the most logical product from its available data 24 and then provides an advertisement insert that is added to the end user's search page, in an attempt to present the end user with the product that is closest to the need as determined by the associative search engine 18 of the selling machine 10."

Note that the instant claims do not contain the Markush language of the other claims in this rejection. Further, the above passage does not disclose, expressly or inherently, two search engines with the same algorithm.

The Examiner did not support an anticipation rejection of Claims 23 and 37 because the language on which the rejection was based is not in the claims. The rejections are, therefore, improper and should be overturned.

Rejections under 35 U.S.C. §102(e) over U.S. Patent No. 6,421,652 to Loeb et al. ("Loeb")

Summary of the Loeb reference: In brief, the Loeb reference provides a method and system for providing free subscriptions to magazines, based on a universal questionnaire. Questions of the universal questionnaire are presented to consumers, and, based on the consumer response to these questions, a supplier order for a free subscription to a magazine is generated and sent to a supplier of the magazine.

The "universal questionnaire" (Figure 11C) asks questions such as "What is your profession?", "As an engineer, your title is?" and so on. More specifically, "[t]he fields whose data is retrieved directly from consumers answers to the universal questionnaire include the consumer name, consumer address and e-mail address, consumer profession, consumer title, field of specialty, qualification date and personal identifier" (column 7, lines 42-47).

Claim 1 (with dependent claims 2 and 7 argued separately, infra). Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show that Loeb discloses "receiving, from the user, a series of search rules comprising facts about an advertisement" as recited in Claim 1.

- The Examiner did not show that Loeb discloses "accessing a database comprising details of a plurality of advertisements" as recited in Claim 1.

- The Examiner did not show that the Loeb reference discloses "using a search engine to apply said search rules to said database" as recited in Claim 1.

- The Examiner did not show that Loeb discloses "reporting, to the user, results comprising a subset of the contents of said database" as recited in Claim 1.

The Examiner did not show that Loeb discloses "receiving, from the user, a series of search rules comprising facts about an advertisement" as recited in Claim 1. In the first, non-final office action, the Examiner alleged that Figure 8, element 820 of Loeb, column 9, lines 45-54 and column 9, lines 12-19 together disclose "receiving, from the user, a series of search rules comprising facts about an advertisement." Further in the second, final office action the Examiner expanded the above cited matter to include column 9, lines 10-53.

Figure 8, element 820 discloses a process step labeled "Receive consumer professional information in response to universal questionnaire and determine appropriate magazine subscriptions." The subject matter of this process step appears to include "consumer professional information" but does not solicit "search rules comprising facts about an advertisement."

> **Loeb, column 9, lines 10-53:** "The subscription process involves a series of steps through which the system establishes data stored in consumer database 354. As shown in FIG. 8, the first

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step comprises advertising to consumers 125 the availability of free trade publications (step 810). Such advertising can be provided in a number of ways, but the key aspect is introducing and providing the universal questionnaire to a wide variety of consumers.

First, the free trade publication promotion may be advertised on credit card statements. Most consumers who are professionals use credit cards, and therefore may qualify for trade publications. Also, the promotion may be advertised in frequent flyer statements, another good source because recipients are generally professionals, and many are business travelers. In addition to physical statements, the promotion may also be included as part of the credit card or airline website. Consumers who are attracted to the site will see a message that says: "If you are a professional, you probably qualify for one or more FREE publications about your business. Just answer a few questions to see what business publications you can enjoy, FREE." In this manner, the consumer 125 may be linked directly to the website of central controller 110 from the credit card or airline website. Next, the promotion may be advertised in professional catalogs and as a website link for those catalogs on-line. Again, such catalogs include readers focused in particular industries that are relevant for many trade publications. Finally, the promotion may be advertised on internet and intranet sites (in addition to those previously mentioned) that provide advertising and, depending on the website, are targeted towards professionals. The site provides an easy link to the website of the present invention (and central controller 110). In an alternate embodiment, the site provides a 1-800 number for a potential subscriber to call and contact central controller 110 directly.

Once consumers 125 have come into contact with the website provided by central controller 110, the central controller 110 transmits the universal questionnaire, receives certain consumer information in response to the universal questionnaire and determines the appropriate free trade publication subscription(s) the consumer 125 may receive (step 820). The universal

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questionnaire transmitted in step 820 is described in greater detail below, with reference to FIGS. 9, 10 and 11A-C."

While the above appears to refer generally to an advertised service and specifically to a way of assigning free magazine subscriptions to professional consumers, *nowhere* in the cited matter is described, either expressly or inherently, "receiving, from the user, a series of search rules comprising facts about an advertisement" as recited in Claim 1. The word "advertisement" or its plural do not even appear in Loeb. The term "advertising" is used to describe the way in which the free magazines make money and a way in which a professional might know about the service provided in the Loeb disclosure. However, the facts solicited in Loeb are found in the "universal questionnaire," which "receives certain consumer information" such as "consumer name, consumer address and e-mail address, consumer profession, consumer title, field of specialty, qualification date and personal identifier." (column 7, lines 42-47) Such information in no way corresponds to "facts about an advertisement" as recited in Claim 1.

The Examiner did not show that Loeb discloses "accessing a database comprising details of a plurality of advertisements" as recited in Claim 1. In the first, non-final office action, the Examiner alleged that the element, "accessing a database comprising details of a plurality of advertisements" can be found in column 5, lines 40-48.

> **Loeb, column 5, lines 40-48:** "The central controller 110 also includes a search server 260 and corresponding hot swap server 262. The search server 260 is coupled to the database server farm 240 to optimize the search capability of the central controller 110. More specifically, the presentation server farm 220 controls the search server 260, which in turn, locally stores the databases 242, 244, 246, 248, as needed to perform searches. Like the other hot swap servers, the search hot swap server 262 provides redundancy should the search server 260 fail."

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It is unclear how the Examiner could ever have derived "accessing a database comprising details of a plurality of advertisements" from the above cited matter. Indeed, a "database comprising details of a plurality of advertisements" does not appear in Loeb. The Examiner failed to address Appellant's similar arguments in subsequent office actions.

The Examiner did not show that the Loeb reference discloses "using a search engine to apply said search rules to said database" as recited in Claim 1. The antecedent bases of "said search rules" and "said database" are "search rules comprising facts about an advertisement" and "a database comprising details of a plurality of advertisements" respectively. Logically, if both of these antecedent bases are not disclosed in Loeb, then the instant claim element is not disclosed in Loeb.

In the first, non-final Office action, the examiner alleged that the instant subject matter is contained in Figure 2, element 260 and column 5, lines 40-48 (reproduced supra). Figure 2, element 260 shows a "search server" but does not fill in the antecedent bases as described above. Indeed, nothing in Loeb provides "search rules comprising facts about an advertisement" and "a database comprising details of a plurality of advertisements."

The Examiner did not show that Loeb discloses "reporting, to the user, results comprising a subset of the contents of said database" as recited in Claim 1. The antecedent basis of "said database" is "a database comprising details of a plurality of advertisements". A subset of the above described database must logically contain details of at least one advertisement.

The Examiner cites Figure 8, element 830 and column 9, lines 54-58 and alleged that the matter above can be found therein. Element 830 of Figure 8 contains the entry "Transmit potential choices for magazine subscription(s) to consumer."

Loeb, column 9, lines 54-58: "Upon completion of the universal questionnaire, the central controller 110 determines the appropriate trade publications that apply to consumer 125, and notifies consumer 125 that he may receive any or all of them at no charge (step 830). As noted earlier, certain trade publications that con..."

While Loeb produces a list of magazines that might be of interest, nothing in the cited matter, above indicates that Loeb reports, to the user "results comprising a subset of the contents of said database," wherein "said database" has antecedent basis "a database comprising details of a plurality of advertisements." Indeed, as indicated above, "a database comprising details of a plurality of advertisements" is nowhere to be found in Loeb.

Based on the foregoing, rejection of Claim 1 as being unpatentable over Loeb is improper and should be reversed.

Claim 39 (with Claim 41 argued separately infra). Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show that Loeb discloses "receiving a set of search terms comprising words having targeted connotative significance to a particular demographic segment" as recited in Claim 39.

- The Examiner did not show that Loeb discloses the elements of Claim 1, which are similar to all but one of the elements of Claim 39.

The Examiner did not show that Loeb discloses "receiving a set of search terms comprising words having targeted connotative significance to a particular demographic segment" as recited in Claim 39. In the first non-final office action, the Examiner states:

> **Examiner's first non-final office action, pages 8-9, lines 21-22, 1-3:** "With all limitations as in Claim 1, further claim 39 in includes a 'Search terms comprising words having targeted connotative significance to a particular demographic segment'.
>
> Referring to Fig. 11C, the user must enter their choices by selecting the appropriate answer or type in the answer (col. 13, lines 23-28). These responses correspond to the search terms that comprising a plurality of words."

> **Loeb, column 13, lines 23-28:** "In one embodiment, shown in FIG. 11C, the consumer 125 is offered a set of possible answers to choose from. In another embodiment, the consumer may simply type in or speak his answers without the need for a group of choices, and the central controller 110 determines the next question or set of questions based on each specialized answer."

Figure 11C, cited by the Examiner, shows an "Example of Universal Questionnaire." However, the questions do not appear to solicit "words having targeted connotative significance to a particular demographic segment." Indeed, the information solicited in this context appears to be entirely denotative, for example, "What is your profession?", "As an engineer, your title is?", "As a Research Engineer, your field of specialty is?" and so on. The figure further includes:

> "If A_1=A and A_2=A and A_5=A then consumer qualifies for magazines X, Y and Z."

Thus, the point of the inputs to Loeb's "universal questionnaire" is to <u>denote</u> the professional activities of the person filling out the questionnaire. Whatever connotative meaning might be derived from the

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noun, "engineer," for example, is lost in the if-then logic shown above. There is no expressed or inherent need for - and no mention of - "targeted connotative significance" in the cited matter or anywhere else in Loeb. A box is either checked or it is not checked. The text cited by the Examiner contributes nothing further since it merely describes how data might be entered.

The examiner mentioned, but did not address, the feature "words having targeted connotative significance to a particular demographic segment" in the argument above. Instead, the Examiner's argument merely states "the user must enter their choices by selecting the appropriate answer or type in the answer (col. 13, lines 23-28). These responses correspond to the search terms that comprising a plurality of words." There is no showing that connotation plays any role whatsoever in the Loeb disclosure. Further, there is no showing of the connection between "connotative significance" and a "particular demographic segment" in the matter cited by the Examiner or anywhere else in Loeb.

The Examiner did not show that Loeb discloses the elements of Claim 1, which are similar to all but one of the elements of Claim 39. In the discussion regarding Claim 1, supra, it was shown that "[t]he Examiner did not show that Loeb discloses "accessing a database comprising details of a plurality of advertisements." Further it was shown that "[t]he Examiner did not show that the Loeb reference discloses "using a search engine to apply said search rules to said database." And that "[t]he Examiner did not show that Loeb discloses 'reporting, to the user, results comprising a subset of the contents of said database.'" The discussion concerning the relevant elements of Claim 1 is incorporated by reference.

The Examiner did not respond to Appellant's previous arguments in his response to first non-final office action dated 19 December, 2004.

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Based on the foregoing, rejection of Claim 39 as being unpatentable over Loeb is improper and should be reversed.

Claim 42 (with claim 44 argued separately infra): Appellant will show that the Examiner has failed to meet the burden of establishing a prima facie case for anticipation under the standard cited above. In particular, Appellant will show the following:

- The Examiner did not show that Loeb discloses the elements in common with Claim 39, namely "(a) receiving a list of search terms comprising words having connotative significance to a targeted demographic segment; (b) accessing a database comprising details of a plurality of advertisements; (c) using a search engine to apply said list of search terms to said database."

- The Examiner did not show that Loeb discloses "(d) reporting results of the search comprising a subset of the contents of said database, said results being indexed uniquely."

- The Examiner did not show that Loeb discloses "repeating steps (a) – (d) a number of times with at least one different search term in said list, said number being sufficient to cover the desired demographic space."

The Examiner did not show that Loeb discloses the elements in common with Claim 39, namely "(a) receiving a list of search terms comprising words having connotative significance to a targeted demographic segment; (b) accessing a database comprising details of a plurality of advertisements; (c) using a search engine to apply said list of search terms to said database. "The Examiner lumped together independent claims 39 and 42, presumably because of certain common elements in those claims. However, it is not conceded that these claims are undifferentiated. Nevertheless, Appellant showed supra that the above common elements with Claim 39 were not shown by the Examiner to be disclosed expressly or inherently in Loeb. Further, the instant elements simply do not appear in Loeb. Accordingly, the discussion of Claim 39 that covers the above elements is incorporated by reference.

The Examiner did not show that Loeb discloses "(d) reporting results of the search comprising a subset of the contents of said database, said results being indexed uniquely." The examiner completely ignores this element, which is not disclosed in Loeb in any case. In particular, there is no "database comprising details of a plurality of advertisements" in Loeb. Further, there is no indexing feature for search results as is recited in the claim in Loeb and nowhere does the Examiner cite one. When establishing a case for anticipation, the Examiner does not have the option of ignoring a claim limitation. Accordingly, the Examiner has not met the burden of establishing a prima facie case for anticipation.

The Examiner did not show that Loeb discloses "repeating steps (a) – (d) a number of times with at least one different search term in said list, said number being sufficient to cover the desired demographic space." As above, the Examiner completely ignores this element, which, in any case, is not disclosed in Loeb. In particular, there is no iterative feature which allows coverage of "the desired demographic space" in Loeb. The terms "connotative" and "demographic" do not even appear in Loeb. When establishing a case for anticipation, the Examiner does not have the option of ignoring a claim limitation. Accordingly, the Examiner has not met the burden of establishing a prima facie case for anticipation.

The Examiner did not respond to Appellant's previous arguments in his response to first non-final office action dated 19 December, 2004.

Based on the foregoing, rejection of Claim 42 as being unpatentable over Loeb is improper and should be reversed.

Claims 2 and 7: These are dependent claims. Accordingly, they will have all of the limitations of Claim 1. However, these claims are being argued separately because they both commonly recite "the

user experienced said advertisement previously" and because the Examiner's argument appears to be facially improper.

In the Examiner's first non-final rejection, dated 12 April, 2004, the examiner states:

Examiner's first non-final rejection, page 7, lines 19-22: Because the advertising can be advertised in different ways such as flyer, or website (col. 9, lines 18-19, 24-26) the user must experience with the promotion and show an interested in it in order to make the request [sic.].

Loeb, column 9, lines 18-19, 24-26: "First, the free trade publication promotion may be advertised on credit card statements. Most consumers who are..." ... "...business travelers. In addition to physical statements, the promotion may also be included as part of the credit card or airline website. Consumers who are attracted to the site will..."

The Examiner's remark is simply not understood. However, what the cited material shows is that the Loeb services can be advertised to a user who might want a magazine subscription. They do not show a user searching for an advertisement by inputting "a series of search rules comprising facts about an advertisement" and "accessing a database comprising details of a plurality of advertisements." The Examiner did not respond to appellant's previous arguments in his response to first non-final office action dated 19 December, 2004.

Based on the foregoing, rejection of Claims 2 and 7 as being unpatentable over Loeb is improper and should be reversed.

Claims 4, 9, 41 and 44. These are dependent claims. Accordingly, they will have all of the limitations of the claims from which they depend. However, these claims are being argued separately because they

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all commonly recite "the algorithm of said search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning" and because the Examiner's argument appears to be facially improper.

Examiner alleges that the disclosure of the Loeb reference in Figure 10 and col. 12, lines 2-6 discloses matter in the Markush language of Claims 4, 9, 41 and 44 "the algorithm of said search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning."

Figure 10 generally outlines the flow diagram for asking questions of the potential magazine subscriber to determine whether a magazine subscription is appropriate. It does not appear to be a search engine, but rather an algorithm for a structured query. In any case, there is no recitation of deductive reasoning, fuzzy logic or abductive reasoning in the figure.

> **Loeb, column 12, lines 2-6:** "...consumer 125 (step 1010). Questions of the universal questionnaire are generated based on a complex set of algorithms and artificial intelligence. One example is a "virtual form" based on "if-then" logic which focuses certain trade publications to a consumer based on the answers provided."

The cited matter does not define a search engine. Further, it is unclear to Appellant how the algorithm outlined therein is shown to be "selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning." Given the apparently deterministic nature of the algorithm and the apparently complete information set used by the method disclosed by Loeb, one can eliminate fuzzy logic (which provides a simple way to arrive at a definite conclusion based upon vague, ambiguous, imprecise, noisy, or missing input information) and abductive reasoning (in which hypotheses are formed and evaluated – usually based on incomplete information). However, it not clear how the remaining element of the Markush group, deductive reasoning (which uses a major premise and at least one minor premise to

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arrive at a definite conclusion), is disclosed by the Loeb reference. Indeed, Loeb discloses a "'virtual form' based on based on 'if-then' logic which focuses certain trade publications to a consumer based on the answers provided." This does not appear to be "deductive reasoning," as recited in the claims of this section. Nowhere in the Loeb reference are deductive reasoning, fuzzy logic or abductive reasoning disclosed by name.

<u>Given that Loeb gives no clear identification of any of the members of the Markush group in the instant claims, and that the cited matter does not describe a search engine, Appellant respectfully submits that the prima facie case for anticipation by Loeb of Claims 4, 9, 41 and 44 has not been made and that rejection of these claims is improper and should be reversed.</u>

Rejections under 35 U.S.C. §103(a) over U.S. Patent No. 6,421,652 to Loeb et al. ("Loeb")

Rejections for obviousness are governed by MPEP §2143 and precedents cited therein.

> **MPEP §2143:** "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

None of the arguments presented to rebut the Examiner's obviousness rejections of Claims 11-38 (Applicant's response to first non-final office action, dated 19 December, 2004, pages 34-37) ever

received a response from the Examiner. Much of the material in what follows will therefore be taken from the above cited-paper.

Claim 11: Appellant has already shown that the Examiner has failed to meet the burden of establishing a prima facie case for obviousness under the standard cited above because certain claim limitations in common with claim 1 are not to be found in Loeb. In particular, Appellant has already shown the following:

- The Examiner did not show that Loeb discloses "querying the user to obtain one or more search rules comprising facts about an advertisement" as recited in Claim 11.

- The Examiner did not show that Loeb discloses "accessing a database comprising details of a plurality of advertisements; using a first search engine to apply said search rules to said database to obtain results comprising a first subset of the contents of said database" as recited in Claim 11 because "one or more search rules comprising facts about an advertisement" are not disclosed in Loeb and because "a database comprising details of a plurality of advertisements" is not disclosed in Loeb.

Appellant recites further in Claim 11:

> **Claim 11 excerpt:** "...receiving from the user one or more keywords; using said keywords and a second search engine to query said first subset; and reporting, to the user, results comprising a second subset of the contents of said database, wherein said second subset is smaller than said first subset.

The Examiner acknowledges that a second search engine is not used to refine the result in Loeb.

The examiner's remarks are given below:

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Examiner's first non-final rejection, pages 9-10, lines 17-23 (approximate), 1-6: "Applicant uses a first and second search engine to refine the search result. Referring to Fig. 10, element 1025 - 1040, Loeb discloses a logic for eliminate the result by providing more questions to be asked to the consumer. As the result, only a certain numbers of magazines are available for certain consumer (See Fig. 11B). clearly, Loeb discloses a method to refine the search result using a search engine. However, Loeb does not clearly disclose two separate search engines. Loeb, refers to another search engine to do the job if the current fails (see Fig. 2, element 262, col. 5, lines 16 - 18,47 - 48). It is clear that the claimed provision is inherent. Nonetheless, to expedite prosecution, even if the limitation of the above were not inherent, it would have been obvious to one with ordinary skill in the art at the time the invention was made to use multiple search engines to search for information, because it provides more availability of the system to the user in the searching process."

The Examiner appears to argue in the alternative that either the use of a second search engine is inherent or that it would have been obvious to one of ordinary skill in the art to use multiple search engines.

Figure 10 of Loeb shows an iterative logic process for querying the potential subscriber that does not appear to be a search engine. Nevertheless, assuming *arguendo* that it performs some search function, we will continue with the analysis.

With respect to the above inherency rejection, the mere fact that the system provided by the Loeb disclosure asks more questions to refine the result cannot, by itself, be the equivalent of having a second search engine after obtaining a "first subset." In addition, the matter in the Loeb reference cited by Examiner to further support inherency discloses a "Hot Swap Server" that "provide[s] redundancy and allow[s] for continued availability in the event of a component failure" and "provides redundancy should the search server 260 fail." These are not second search engines that further refine search results, but

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rather redundant hardware systems such as servers and other components that are present to take over in the event of a failure of the primary hardware. While such redundancy may be a part of any good business computer system, it cannot contribute to forming a basis for the inherency of two separate search engines in the Loeb reference because redundant hardware addresses a totally different issue than that addressed by two search engines, namely, failure of the primary hardware. Redundant hardware, as disclosed by Loeb, would have no effect on the search result except in the event of a failure of the primary hardware. Even in that event, the secondary hardware would produce exactly the same result as the primary, had it not failed.

Under principles of inherency, when a reference is silent about an asserted inherent characteristic, it must be clear that the missing descriptive matter is <u>necessarily</u> present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). Such is not the case here. A redundant system whose purpose is to provide back-up would not <u>necessarily</u> be used to provide further refinement of a search result in addition to the system already in place.

In the alternative, Examiner argues that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple search engines to search for information, because it provides more availability of the system to the user in the searching process." However, as noted by Examiner, Loeb does not disclose two separate search engines. That being the case, MPEP §2143 requires that there must be some "suggestion or motivation" to modify the Loeb reference to accommodate two separate search engines. It is respectfully submitted that Examiner has proffered no such suggestion or motivation from the Loeb reference. Further, it is respectfully submitted that the statement "...because it provides more availability of the system to the user in the searching process" does not provide a suggestion or motivation to modify the Loeb reference because, as the Examiner notes, the Loeb reference already "discloses a logic for eliminate the result by providing more questions

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to be asked to the consumer" [using one refinement processor] which, in itself, would satisfy the need to provide "more availability of the system to the user in the searching process" and accomplish the objectives of the Loeb reference <u>without in any way modifying the reference.</u> <u>Indeed, the Loeb process of asking more questions constitutes a "teaching away" from using two search engines.</u> Based on the above, neither a prima facie case for anticipation by inherency nor a prima facie case for obviousness in view of the Loeb reference has been supported with respect to the limitation reciting "a first search engine" and "a second search engine" as recited in claims 11.

In addition, to requiring a suggestion or motivation to modify the prior art reference(s), MPEP §2143 further requires that "the prior art reference (or references when combined) must teach or suggest all the claim limitations." As noted above, Loeb does not provide "querying the user to obtain one or more search rules comprising facts about an advertisement" or "accessing a database comprising details of a plurality of advertisements."

<u>Based on the above, the rejection of Claim 11 for obviousness or for anticipation by inherency is improper and should be reversed.</u>

Claim 25: Appellant has already shown that the Examiner has failed to meet the burden of establishing a prima facie case for obviousness under the standard cited above because certain claim limitations in common with claim 1 are not to be found in Loeb. In particular, Appellant has already shown the following:

- The Examiner did not show that Loeb discloses "querying the user to obtain one or more search rules comprising facts about an advertisement" as recited in Claim 25.
- The Examiner did not show that Loeb discloses "accessing a database comprising details of a plurality of advertisements; using a first search engine to apply said search rules to said database to obtain results comprising a first subset of the contents of said database" as recited in Claim 25

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because "one or more search rules comprising facts about an advertisement" are not disclosed in Loeb and because "a database comprising details of a plurality of advertisements" is not disclosed in Loeb.

Further, as was demonstrated supra in the discussion of Claim 11:

- The Examiner did not show that Loeb discloses inherently "using said keywords and a second search engine to query said first subset; and reporting, to the user, results comprising a second subset of the contents of said database, wherein said second subset is smaller than said first subset." In addition, the Examiner did not show that it would have been obvious to one of ordinary skill in the art to modify the Loeb reference to provide a second search engine because the Loeb reference actually "teaches away" from using a second search engine to refine the result by providing more questions to the first process.

Finally,

- The examiner ignored the element: "generating a second list of keywords, said second list comprising keywords or phrases synonymously related to one or more keywords or phrases in said first list; using said second list and a second search engine to query said first subset," which is recited additionally in Claim 25.
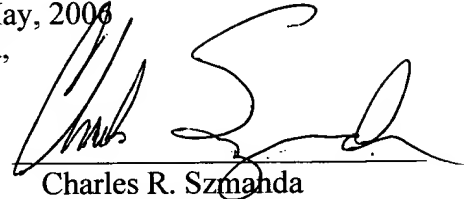
In establishing a prima facie case for anticipation or obviousness, the Examiner does not have the option of simply ignoring a claim limitation.

<u>Based on the above, the rejection of Claim 25 for obviousness or for anticipation by inherency is improper and should be reversed.</u>

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Conclusion

For the reason cited above, Appellant respectfully submits that the rejections of the instant claims are improper and requests reversal of the outstanding rejections.

Dated this 9th day of May, 2006
Respectfully submitted,

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8. Claims Appendix

1. A method of supplying advertisement information to a user searching for said information within a data network, comprising the steps of: receiving, from the user, a series of search rules comprising facts about an advertisement; accessing a database comprising details of a plurality of advertisements; using a search engine to apply said search rules to said database; and reporting, to the user, results comprising a subset of the contents of said database.

2. The method of claim 1 wherein the user experienced said advertisement previously.

3. The method of claim 1 wherein the data network comprises the Internet.

4. The method of claim 1 wherein the algorithm of said search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

5. The method of claim 1 wherein said advertisement information comprises contact information.

6. The method of claim 1 wherein said user is a customer.

7. The method of claim 6 wherein the customer experienced said advertisement previously.

8. The method of claim 6 wherein the data network comprises the Internet.

9. The method of claim 6 wherein the algorithm of said search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

10. The method of claim 6 wherein said advertisement information comprises contact information.

11. A method of supplying advertisement information to a user searching for desired information within a data network, comprising the steps of: querying the user to obtain one or more search rules comprising facts about an advertisement; accessing a database comprising details of a plurality of advertisements; using a first search engine to apply said search rules to said database to obtain results comprising a first subset of the contents of said database; receiving from the user one or more keywords; using said keywords and a

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second search engine to query said first subset; and reporting, to the user, results comprising a second subset of the contents of said database, wherein said second subset is smaller than said first subset.

12. The method of claim 11 wherein said user experienced said advertisement previously.

13. The method of claim 11 wherein the data network comprises the Internet.

14. The method of claim 11 wherein the algorithm of said first search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

15. The method of claim 11 wherein the algorithm of said second search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

16. The method of claim 11 wherein the algorithm of said first search engine is the same as the algorithm of said second search engine.

17. The method of claim 11 wherein said advertisement information comprises contact information.

18. The method of claim 11 wherein said user is a customer.

19. The method of claim 18 wherein said customer experienced said advertisement previously.

20. The method of claim 18 wherein the data network comprises the Internet.

21. The method of claim 18 wherein the algorithm of said first search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

22. The method of claim 18 wherein the algorithm of said second search engine is selected from a group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

23. The method of claim 18 wherein the algorithm of said first search engine is the same as the algorithm of said second search engine.

24. The method of claim 18 wherein said advertisement information comprises contact information.

25. A method of supplying advertisement information to a user searching for desired information within a data network, comprising the steps of: querying the user to obtain one or more search rules comprising facts about an advertisement; accessing a database comprising details of a plurality of advertisements; using a first search engine to apply said search rules to said database to obtain a plurality of results comprising a first subset of the contents of said database; receiving, from the user, a first list of keywords; generating a second list of keywords, said second list comprising keywords or phrases synonymously related to one or more keywords or phrases in said first list; using said second list and a second search engine to query said first subset; and reporting, to the user, results comprising a second subset of the contents of said database, wherein said second subset is smaller than said first subset.

26. The method of claim 25 wherein said user experienced said advertisement previously.

27. The method of claim 25 wherein the data network comprises the Internet.

28. The method of claim 25 wherein the algorithm of said first search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

29. The method of claim 25 wherein the algorithm of said second search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

30. The method of claim 25 wherein the algorithm of said first search engine is the same as the algorithm of said second search engine.

31. The method of claim 25 wherein said advertisement information comprises contact information.

32. The method of claim 25 wherein said user is a customer.

33. The method of claim 32 wherein said customer experienced said advertisement previously.

34. The method of claim 32 wherein the data network comprises the Internet.

35. The method of claim 32 wherein the algorithm of said first search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

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36. The method of claim 32 wherein the algorithm of said second search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

37. The method of claim 32 wherein the algorithm of said first search engine is the same as the algorithm of said second search engine.

38. The method of claim 32 wherein said advertisement information comprises contact information.

39. A method of facilitating demographic research by supplying advertisement information to a user searching for information within a data network, comprising the steps of: receiving a set of search terms comprising words having targeted connotative significance to a particular demographic segment; accessing a database comprising details of a plurality of advertisements; using a search engine to apply said search terms to said database; and reporting results comprising a subset of the contents of said database.

40. The method of claim 39 wherein said user is an advertiser.

41. The method of claim 39 wherein the algorithm of said search engine is selected from a group consisting of deductive reasoning, abductive reasoning and fuzzy logic.

42. A method of performing demographic analysis of advertisements, comprising the steps of: (a) receiving a list of search terms comprising words having connotative significance to a targeted demographic segment; (b) accessing a database comprising details of a plurality of advertisements; (c) using a search engine to apply said list of search terms to said database; (d) reporting results of the search comprising a subset of the contents of said database, said results being indexed uniquely; and (e) repeating steps (a) – (d) a number of times with at least one different search term in said list, said number being sufficient to cover the desired demographic space.

43. [Canceled in preliminary amendment]

44. The method of claim 42 wherein the algorithm of said search engine is selected from a group consisting of deductive reasoning, abductive reasoning and fuzzy logic.

Specification Appendix

Including line and page numbers and amendments entered after first non-final office action

Written description

Drawings

Abstract

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A Method of Retrieving Advertising Information and Use of the Method

Jeffrey P. Szmanda

FIELD OF THE INVENTION

[0001] The present invention generally relates to the field of advertisement response facilitation, and specifically relates to a method of retrieving information about advertisements presented in any medium and the use of the method to facilitate demographic research.

BACKGROUND OF THE INVENTION

[0002] The advent of the Internet has resulted in the ability to communicate data across the globe instantaneously, and will allow for numerous new applications that enhance consumer's lives. One of the enhancements that can occur is the ability of the consumer to retrieve information rapidly that is relevant to his or her lifestyle and interests at any time the consumer wishes, instead of accepting programmed information on media such as radio, television, print, public displays such as billboards, internet banner advertisements and the like.

[0003] In particular, advertising captures the consumer's attention at times when the consumer is unable or unwilling to pay sufficient attention to allow retention of potentially useful details such as, but not limited to, product characteristics, price and/or terms of sale, product options, availability, purchase venue, advertiser contact information and brand. In addition, consumers do not necessarily make purchase decisions at the time the advertisement is presented or seen. For example, the consumer might be made aware of the existence of a new product because of an advertisement. The decision to buy that product or to view that product as desirable may require some time after the advertisement is experienced. During such a period of time, referred to herein as the ideation period, details such as those above may be lost from the consumer's memory; the consumer may have only the general perception that the product is desirable or may have formed no perception at all. Nevertheless, the advertising may have made an impression on the consumer. Such an impression may be vague or highly specific. Therefore, a method of accessing the necessary information is required to enable the consumer to (a) refine further his or her impression of the product and/or advertiser, (b)

1   form or enhance his or her perception of the product and/or advertiser, (c) consummate a

2   purchase of the advertiser's product or (d) engage in other behavior or behavior patterns

3   consistent with the interests of the advertiser or intended purpose of the advertisement.

4   [0004] A decision to purchase a product may evolve over the course of the ideation

5   period, even as the consumer's memory of advertised details erodes. Such details

6   comprise product characteristics, price and/or terms of sale, product options, availability,

7   purchase venue, brand and advertiser contact information. It is known in the advertising

8   art that advertisements laden with such detail must be repeated frequently so that

9   consumers can be reminded and retain sufficient information to enable a purchase

10   decision and subsequent consummation of a purchase. However, advertising is done at

11   great expense and unnecessary repetition must be avoided. Thus, it would be desirable to

12   aid consumers by providing a convenient method of information retrieval regarding

13   advertisements so that such details can be provided to consumers at little or no cost to the

14   advertiser and little or no cost to the consumer.

15   [0005] The ideation period may be of short or long duration but, in either case, may

16   culminate in a decision to purchase an advertised product or in the formation of an

17   impression of the product or its producer as a result of experiencing the advertisement.

18   Either or both outcomes may comprise the intended effect of the advertising. In addition,

19   it is sometimes desired by advertisers to influence certain behavior or activity by the

20   consumer. Such behavior or activity may include but is not limited to a commitment or

21   pledge to purchase or make one or more purchases over time, an inquiry about the

22   product or advertiser, an effort to try or sample the product, an investment in securities

23   using the services of a broker or other intermediary, a discussion of the product with

24   associates, a change in opinion about a product or issue, a participation in political

25   activity such as voting in political, corporate or association elections or referenda in a

26   manner favorable to the position of the advertiser or an expression of an opinion to an

27   elected representative for the purpose of influencing his or her actions. It is known in the

28   art that influencing opinions and behavior requires considerable repetition in order that

29   consumers can be reminded of and retain sufficient information to enable decision-

1   making and subsequent follow-through. However, advertising is done at great expense

2   and unnecessary repetition must be avoided. Accordingly, it would be desirable if other

3   means could be provided to obtain information about advertised details so that consumers

4   are able to access such details readily without numerous viewings of the same or similar

5   advertisements.

6   [0006] If the intended outcome of the advertising is to modify purchasing behavior, such

7   advertising can influence the consumer to create a desire or perceived need for a product

8   where there had been no such perceived need or desire previously. Such desire or

9   perceived need may arise after the period of ideation and/or decision making, during

10 which time, the consumer may be influenced unconsciously or consciously by the

11 advertisement to view the advertised product in a favorable light, to desire the product

12 and/or weigh cost and benefits of the product relative to other purchases that might be

13 made. During the course of such a period, potentially useful details such as, but not

14 limited to, product characteristics, price and/or terms of sale, product options, availability,

15 purchase venue, brand and advertiser contact information may be lost or diminished in

16 the consumer's memory, even though the desire for the product has been created. A

17 convenient means of accessing the necessary information is required to enable

18 consummation of the desired outcome by the consumer.

19 [0007] Further, it is not required that the advertisement contain potentially useful details

20 including, but not limited to, product characteristics, price and/or terms of sale, product

21 options, availability, purchase venue, brand and advertiser contact information. For

22 example the advertiser may wish to influence the consumer to decide to purchase the

23 product without actually doing so, in such circumstances as, when the product will

24 become available at a later time, when the consumer requires or desires the product at a

25 later time or when the advertisement is intended to influence the consumer's long-term or

26 continual purchase behavior. As another example, the advertiser may wish the consumer

27 to seek affirmatively the necessary information to enable consummation of the purchase

28 of the advertiser's product. In this way, the consumer is encouraged to be an active –

29 rather than a passive participant in the advertising process. In cases where the advertiser

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1   provides little or no such detail, a means of accessing the necessary information is

2   required.

3   [0008] In certain circumstances the advertiser may wish to induce the consumer to

4   follow a chain of advertisements in anticipation of gaining successively more information

5   about the product or subject matter being advertised, thus leading the consumer through a

6   sequence of behaviors or decisions that are intended to culminate in the desired outcome.

7   Such outcome may be an overt purchase, a decision to purchase, an overt action such as

8   political or voting activity, a commitment to take action in the future, volunteer activity,

9   or the decision to commit to continual behavior consistent with the intention of the

10   advertiser. At any point in the chain of advertisements, including the endpoint, the

11   consumer may not have gained sufficient information or may not have retained sufficient

12   information to enable consummation of the outcome desired by the advertiser. It is

13   known in the art that the pursuit of such an advertising strategy may require significant

14   repetition, not only of the individual segments but also of the final segment that

15   completes the series. Otherwise, consumers who view the chosen advertising medium

16   less frequently or infrequently may miss critical details and may therefore be unable to

17   consummate a purchase or engage in the desired activity because sufficient information is

18   unavailable. However, if consumers were provided with a convenient method of retrieval

19   of advertising information, they would be able to obtain the necessary information to

20   consummate such a purchase or activity.

21   [0009] It is known in the art of advertising that the advertisement's content is

22   communicated to consumers who are under many different circumstances. Accordingly,

23   the advertiser must compete for the consumer's attention in a way that makes a lasting

24   impression on the consumer's memory. Advertisements that exhibit a high level of

25   salience are known to make lasting impressions on consumers. Such impressions may be

26   either favorable or unfavorable and can be highly precise or vague. In any case, specific

27   details regarding the subject of the advertising may be lost over time, particularly if the

28   consumer is not in a position to respond to the advertisement or delays in making a

29   decision to respond for any reason.

1   [00010] Communication of advertising content is accomplished through media that

2   convey sensory input to the consumer. Without intending to be bound by theory, it is

3   believed that such sensory input can convey levels of meaning, depending on the sense to

4   which the advertiser is appealing. By relying on multiple levels of meaning, the

5   advertiser frequently employs ambiguity so that the message of the advertisement will

6   appeal to the broadest audience that finds the advertisement relevant. In addition,

7   advertisers are known in the art to employ a range of sensory queues that are meant to

8   connect in some way with the consumer's experience. Because consumers come from a

9   wide range of backgrounds, some sensory queues may connect strongly with the

10   consumer's experience while others do not connect at all. Having experienced the

11   advertisement, the consumer may have difficulty describing his or her reaction precisely.

12   Such imprecision is often desirable from the standpoint of the advertiser and frequently

13   inevitable, particularly in circumstances where there is ambiguity about meaning.

14   Various examples are outlined infra.

15   [00011] The visual mode is among the most frequently employed sensory modes used in

16   advertising. Images can be used to attract the attention of the consumer in circumstances

17   when he or she would not ordinarily be inclined to pay attention to the advertisement. It

18   is known that billboards are placed along the busiest roadways in order to be viewed by

19   the largest number of consumers. However, because such a roadway is busy, consumers

20   who are operating motor vehicles are usually inclined to pay more attention to the road

21   than to the various advertising billboards that are posted alongside the road. For example,

22   such a billboard may be used to advertise a particular automobile. In order to attract the

23   attention of the consumer, the billboard may contain images of the automobile along with

24   images of attractive human models possessing varying degrees of pulchritude. Once the

25   attention of the consumer has been attracted, the message can be conveyed. Such a

26   message can be as simple as "Buy this car." Usually, however, the message is intended to

27   address the consumer's desires on several levels including the desire for comfort, the

28   desire for companionship, the desire for elegance, the desire for an active leisure lifestyle,

29   the desire for speed, the desire for adventure, the desire for fuel economy, the desire for

30   open-air travel and so on. The advertisement may address combinations of consumer

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1   desires. In addition, the very image of the automobile itself may be designed to trigger

2   certain reactions in the consumer. An example may include a sense of machismo, as

3   conveyed by a grill designed in a specific way, a large, protruding hood, a vivid color or a

4   wide wheel base. A further example may be a sense of femininity, conveyed by soft,

5   coordinated colors, elegant curves luxurious interior design and so on. It is understood

6   that the descriptions "masculine," "machismo" or "feminine" are not limited to the sex of

7   the customer but are merely meant to describe certain segments of the population. The

8   message may be conveyed using images alone, written words or combinations thereof. In

9   any case, the entire point of the advertisement must be conveyed during the few seconds

10   in which the consumer views the billboard.

11   [00012] A billboard designed to attract the consumer's attention and convey a range of

12   collateral messages having to do with lifestyle choice, self image or individual desires

13   may leave the consumer with a strong impression, but only a vague recollection of

14   specific details such as car model name or even brand. The message conveyed by the

15   advertisement may nevertheless have imprinted a latent desire for the automobile, which,

16   during a period of ideation, becomes explicit. Without more detailed knowledge of the

17   automobile model, brand and/or dealer location or other contact information, the

18   consumer would be unable to consummate a purchase transaction. A system of

19   advertising retrieval would enable the consumer to obtain specific details that would be

20   necessary to purchase the automobile.

21   [00013] Other visual media are available to advertisers. These include but are not limited

22   to television, newspapers, magazines, the Internet, or any other medium capable of

23   transmitting or displaying visual images. Visual images can be displayed in various ways

24   and over various timescales in such a way that various levels of recall are observed in

25   consumers, ranging from essentially complete recall to mere vague impressions.

26   Consumers may therefore exhibit differing levels of ability to describe their experience

27   after having viewed the advertisement. Further, other artistic visual devices can be used

28   to covey the advertising message or make an impression on the consumer. Such devices

29   can vary in the level of abstraction from highly explicit to highly abstract. In addition,

1   written messages can be conveyed visually and may employ language or other devices

2   that convey messages that range in degree of precision from highly explicit to highly

3   ambiguous. The use of language in advertising is described further infra. It is known in

4   the advertising art that such images evoke feelings in the consumer that are sometimes

5   difficult to describe with precision. Hence, it would be desirable to have a heretofore-

6   unknown means of advertising retrieval that comprises the ability to capture as input, a

7   spectrum of customer descriptions ranging from vague or imprecise impressions to highly

8   explicit depictions of the advertisement.

9   [00014] Audio media are also employed frequently in advertising. It is known in the art

10   that various artistic and communicative devices can be used to convey and lend saliency

11   to the advertiser's message including but not limited to the spoken word, instrumental

12   music, vocal music naturally occurring sounds, sounds that may arise from time to time in

13   human events and sound effects. Used alone or in combination, such devices can be

14   employed to evoke various reactions in consumers ranging from vague impressions to

15   highly explicit emotions.

16   [00015] For example, the spoken word employs a plurality of vocabularies that vary in

17   levels of ambiguity ranging from highly ambiguous to highly explicit. It is known in the

18   advertising art that different audiences are influenced in different ways by language,

19   depending on interest, occupation, cultural background and other characteristics.

20   [00016] Further, it is known that individuals can be influenced in different ways at

21   different times by linguistic devices. For example, an engineer may respond favorably to

22   a message conveyed in a highly explicit vocabulary when the message pertains to matters

23   related to his or her field of endeavor and, in contrast, would not respond well to highly

24   evocative or poetic language conveying the same message. On the other hand, the same

25   individual might respond well to highly evocative, ambiguous or poetic language when

26   such language conveys a message related to personal matters such as romance, a vacation,

27   the birth of a child, normal family activities and the like.

1 [00017] Ambiguity is introduced into language to encompass a range of emotions and

2 other impressions. Such ambiguity arises because individual words and phrases usually

3 possess some combination of connotative and denotative meaning that is known in the art

4 to be useful in conveying a compelling message efficiently. Denotative meaning is

5 defined as that which is explicit and highly particular. For example, the word "three" has

6 the denotative meaning of "2 + 1" and communicates that concept with high precision.

7 [00018] On the other hand, connotative meaning is defined as that which signifies more

8 than the literal meaning of a given word or phrase. Without intending to be bound by

9 theory, it is believed that such meaning arises out of the cultural and contextual evolution

10 of language. The same language can, therefore, have different impact on different

11 demographic groups. Connotation is used frequently as a poetic element to encompass a

12 broader range of meaning than that which might arise from denotation. The same concept

13 is known in the art to be useful in advertising where brevity requires the use of meaning-

14 laden words and phrases to convey a compelling message rapidly. Other terms of art such

15 as "buzzword," "catchphrase," "slang," "jargon," "vernacular" or "colloquial speech" are

16 all meant to convey the same or similar concept as connotative language. For example,

17 the word "score" has the usual denotative meaning related to the accumulation of points

18 in a game by a player or team. In addition, a person can be said to "know the score,"

19 which means to understand clearly his or her situation. Further, one is said to have

20 "settled the score" when a debt is paid or revenge is exacted. In addition, connotative

21 meaning varies across cultural boundaries. For example, the word "handy" in the English

22 language denotes that which is "at hand" or convenient. Connotatively, a "handy man" is

23 one who is capable of doing many types of work. Such a person is said to be "handy."

24 Among those of recent German origin, however, the word "handy" signifies a wireless

25 telephone.

26 [00019] Connotations can evoke both negative and positive reactions in consumers.

27 While it may be desirable to avoid offending certain groups by using words that carry

28 offensive connotative meaning, evoking a negative reaction may not always be

29 undesirable from the standpoint of the advertiser. Such words may elicit a strong reaction

1   in the consumer, which may be useful in inducing the consumer to remember the content

2   of the advertisement. Nevertheless, the feelings evoked by such an advertisement may

3   be difficult to describe in words.

4   [00020] It is also understood that other linguistic elements are useful in the audio

5   presentation of advertising. Such elements include rhyme, rhythm, meter, alliteration,

6   onomatopoeia, synecdoche, metonymy, simile, metaphor and the like. When heard in

7   spoken form or sung, such elements can convey meaning beyond the literal meanings of

8   the words used or attract the attention of or evoke feelings in consumers in ways that are

9   difficult for individual customers to describe precisely.

10   [00021] Other forms of communication can be transmitted through audio channels and

11   are known in the art to enhance the message conveyed in an advertisement. For example,

12   musical elements such as harmony, rhythm, meter and the like can be used to enhance the

13   tone and mood of an advertisement to suggest cultural identity, sense of urgency,

14   demographic appeal, type of enjoyment and the like. For example, melodies using the

15   pentatonic minor scale may be used to identify the product with Asian, African or Native

16   American culture, depending on the types of rhythm that are employed in combination.

17   On the other hand, the addition of the flatted fifth to the pentatonic minor scale, when

18   used with syncopated rhythm, may suggest a bluesy or jazzy mood that enhances the

19   image of the product by identifying it with being "cool" or "hip." Nevertheless, the

20   consumer may not be sufficiently aware of such devices to describe them precisely but

21   may only be able to describe his or her feelings that were evoked by the advertisement.

22   [00022] A less frequently used, although sometimes highly effective element used in

23   advertising is the stimulation of the olfactory sensation. A common application is in the

24   advertising of perfumes. Frequently, olfactory queues are introduced through

25   technologies such as scratch-and-sniff in printed publications or environmentally in

26   entertainment venues. Odors can be powerful triggers of memory or impulses and can

27   evoke feelings such as romance, hunger, nostalgia, or exhilaration. For example, realtors

28   sometimes encourage their clients to bake bread just prior to the arrival of a prospective

29   homebuyer, thus stimulating a nostalgic or home-like feeling that may increase the

1 probability that the house will be sold. While such queues may be powerful, consumers

2 frequently find it difficult to describe their feelings precisely when asked to do so.

3 [00023] Other less frequently used sensory queues include taste and texture. Textural

4 queues are employed in advertising fabrics, carpets, and wall coverings as well as in

5 foodstuffs. The sense of taste is used most frequently in the offer of free samples of food

6 or drink. When familiar foods are sampled, consumers are generally able to provide

7 reasonably precise descriptions of their experience with the sampled food. However,

8 after sampling unfamiliar food, consumers frequently use imprecise language to describe

9 the taste. It has been said, for example, that rattlesnake meat tastes "like chicken," when

10 the actual taste, based on the chemical constituents of the meat, may be very different.

11 Customer descriptions of experiences with texture or taste may depend on cultural factors

12 and will usually be described with varying levels of precision.

13 [00024] From the standpoint of the advertiser, it is necessary to reach target markets,

14 usually comprising specific demographic populations. For products with narrow appeal,

15 such targeting is probably sufficient to cover the contextual advertising space necessary to

16 achieve a high level of saliency with the specific targeted population. When products

17 have a more broad appeal, however, it may be desirable to address specific demographic

18 populations by targeting different advertisements to different groups. Under such

19 circumstances, each advertisement would be presented in such a way as to achieve a high

20 level of saliency and specific positioning within the various targeted demographic

21 populations while maintaining the desired product image and other commonalities

22 consistently across the demographic spectrum. A heretofore-unknown system of

23 advertising retrieval would be useful for mapping the contextual space around a given

24 product offering and across the demographic spectrum to determine whether the desired

25 coverage has been achieved. Furthermore, a heretofore-unknown system of advertising

26 retrieval would be useful for mapping the contextual space around a competitor's product

27 offering and across the demographic spectrum to determine the competitor's targeting

28 strategy.

1 [00025] Thus, a system of advertisement information retrieval, heretofore unknown in

2 the advertising art, would be desirable for the purpose of allowing consumers to recall

3 forgotten details presented in advertisements, particularly when the attempted retrieval is

4 not contemporaneous with the presentation of the advertisement. It is further desirable to

5 allow consumers to use their own words, which may possess varying degrees of precision,

6 as input to a heretofore-unknown advertisement retrieval system that retrieves specific

7 details concerning the content of an advertisement or small numbers of advertisements,

8 whether or not the attempted recall is contemporaneous with the presentation of the

9 advertisement. It is further desirable to allow consumers to input their impressions of an

10 advertisement or group of advertisements into a heretofore-unknown advertisement

11 retrieval system that retrieves and supplies specific details that enable behaviors or

12 actions consistent with the intention of the advertiser when such details were not present

13 in the original advertisement(s), whether or not the retrieval is contemporaneous with the

14 presentation of the advertisement. In addition, a system of advertising retrieval will be

15 useful to advertisers in mapping the contextual space in which advertising messages are

16 placed so that audiences can be targeted with greater accuracy and precision and so that

17 competitive analysis can be performed.

18

19 SUMMARY OF THE INVENTION

20 [00026] It is an object of the present invention to facilitate customer response to

21 advertising by providing a new method of retrieving information about advertisements

22 whether or not details concerning specific advertisements can be recalled. It is a further

23 object of this invention to facilitate an advertiser's demographic research by providing a

24 method of retrieving advertising information based on input of selected search terms or

25 phrases.

26 [00027] The invention, therefore, according to a first broad aspect provides a method of

27 supplying advertisement information to a user searching for desired information within a

28 data network, comprising the steps of: receiving, from the user, one or more search rules

29 comprising facts about an advertisement; accessing a database comprising details of a

1   plurality of advertisements; using a search engine to apply said search rules to said

2   database; and reporting, to the user, results comprising a subset of the contents of said

3   database.

4   [00028] According to a second broad aspect, the invention provides a method of

5   supplying advertisement information to a user searching for desired information within a

6   data network, comprising the steps of: querying the user to obtain one or more search

7   rules comprising facts about an advertisement; accessing a database comprising details of

8   a plurality of advertisements; using a search engine to apply said search rules to said

9   database to obtain a plurality of results comprising a first subset of the contents of said

10 database; receiving one or more keywords from the user; using said keywords and said

11 search engine to query said first subset; and reporting, to the user, results comprising a

12 second subset of the contents of said database, wherein said second subset is smaller than

13 said first subset.

14 [00029] According to a third broad aspect, the invention provides a method of supplying

15 advertisement information to a user searching for desired information within a data

16 network, comprising the steps of: querying the user to obtain one or more search rules

17 comprising facts about an advertisement; accessing a database comprising details of a

18 plurality of advertisements; using a first search engine to apply said search rules to said

19 database to obtain results comprising a first subset of the contents of said database;

20 receiving from the user one or more keywords; using said keywords and a second search

21 engine to query said first subset; and reporting, to the user, results comprising a second

22 subset of the contents of said database, wherein said second subset is smaller than said

23 first subset.

24 [00030] According to a fourth broad aspect, the invention provides a method of

25 supplying advertisement information to a user searching for desired information within a

26 data network, comprising the steps of: querying the user to obtain one or more search

27 rules comprising facts about an advertisement; accessing a database comprising details of

28 a plurality of advertisements; using a search engine to apply said search rules to said

29 database to obtain a plurality of results comprising a first subset of the contents of said

13

1 database; receiving, from the user, a first list of keywords; generating a second list of

2 keywords, said second list comprising keywords synonymously related to one or more

3 keywords in said first list; using said second list and a second search engine to query said

4 first subset; and reporting, to the user, results comprising a second subset of the contents

5 of said database, wherein said second subset is smaller than said first subset.

6 [00031] According to a fifth broad aspect, the invention provides a method of supplying

7 advertisement information to a user searching for desired information within a data

8 network, comprising the steps of: querying the user to obtain one or more search rules

9 comprising facts about an advertisement; accessing a database comprising details of a

10 plurality of advertisements; using a first search engine to apply said search rules to said

11 database to obtain a plurality of results comprising a first subset of the contents of said

12 database; receiving, from the user, a first list of keywords; generating a second list of

13 keywords, said second list comprising keywords or phrases synonymously related to one

14 or more keywords or phrases in said first list; using said second list and a second search

15 engine to query said first subset; and reporting, to the user, results comprising a second

16 subset of the contents of said database, wherein said second subset is smaller than said

17 first subset.

18 [00032] According to a sixth broad aspect, the invention provides a method of

19 facilitating demographic research by supplying advertisement information to a user

20 searching for information within a data network, comprising the steps of: receiving a set

21 of search terms comprising words having targeted connotative significance to a particular

22 demographic segment; accessing a database comprising details of a plurality of

23 advertisements; using a search engine to apply said search terms to said database; and

24 reporting results comprising a subset of the contents of said database.

25 [00033] According to a seventh broad aspect, the invention provides a method of

26 performing demographic analysis of advertisements, comprising the steps of: (a)

27 receiving a list of search terms comprising words having connotative significance to a

28 targeted demographic segment; (b) accessing a database comprising details of a plurality

29 of advertisements; (c) using a search engine to apply said list of search terms to said

1 database; (d) reporting results of the search comprising a subset of the contents of said

2 database said results being indexed uniquely; and (e) repeating steps (a) – (d) a number of

3 times with at least one different search term in said list, said number being sufficient to

4 cover the desired demographic space.

5 [00034] In each of the above broad aspects of the invention, the data network can be a

6 private network, accessed by authorized persons, or a public network such as the Internet.

7 The private network can be accessed via the Internet, using secure connection technology,

8 such as encryption, password protected access or recognition of unique user identifiers

9 such as, but not limited to personal details, fingerprints, retinal data, voice characteristics

10 and the like. The public network can be the Internet or any other network available to the

11 general public. Public or private networks can be accessed using a computer terminal, a

12 personal computer interface, a public kiosk interface which might be found in a shopping

13 venue or roadway rest stop or a wireless device such as a wireless telephone or a wireless

14 Internet interface. The search engines of this invention can reside on a central host

15 computer, a server, a plurality of mirror sites or locally on the user's computer. The

16 advertisement database of this invention can reside on a central host computer, a server, a

17 plurality of mirror sites or locally on the user's computer. The advertisement database

18 can be built for purposes this invention, assembled from various dispersed sources on the

19 Internet into a single database or directed from a list of pointers to various dispersed

20 sources on the Internet.

21 [00035] The search rules supplied by the user need not be sufficiently complete to define

22 a particular advertisement uniquely. Search rules can comprise keywords or phrases

23 describing the advertisement in some way, brand names or portions thereof, "sound-

24 alike" or misspelled words capable of being interpreted by the search engine and applied

25 to the database, a description of color schemes used in the advertisement, a description of

26 the music heard in the advertisement, a description of the linguistic elements employed by

27 the advertisement, a description of the ambient environment depicted in the

28 advertisement, a description of the user's subjective impression after experiencing the

29 advertisement, a description of visual queues perceived in the advertisement, a

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1   description of the plant, animal or human model or models used in the advertisement, a

2   description of the cartoon or caricatured models used in the advertisement, a description

3   of the item advertised, a description of the social situation depicted in the advertisement,

4   a description of the tactile sensations conveyed by the advertisement, a description of the

5   olfactory sensations conveyed by the advertisement, a description of the taste sensations

6   presented by the advertisement, a description of the user's perception triggered by a

7   sensory stimulus or a plurality of stimuli conveyed by the advertisement or a description

8   of the user's impressions of the artistic elements presented in the advertisement or other

9   descriptors characteristic of the advertisement. For purposes of the description of this

10   invention, keywords can be single words, phrases that are not full sentences or full

11   interrogative, declarative or imperative sentences or any combination thereof. In the

12   cases where a given keyword input by the user comprises a multiword phrase or a

13   complete sentence, one of ordinary skill in the art would recognize that such phrases or

14   complete sentences can be parsed to yield relevant single keywords using methods

15   described in standard references such as James Allen, "Natural Language

16   Understanding," Addison Wesley, New York, (1995), Chapters 2,3,6 and 7.

17   [00036] Search rules and keywords or phrases can be input by typing; spoken into a

18   voice recognition system capable of interpreting the input for the search engine; entered

19   via a user interface comprising a pad having one or more real or virtual keys such as a

20   typewriter keyboard, a telephone keypad, or a touch screen; an electronic musical

21   instrument; a handwriting recognition interface; a mouse; an eye movement sensor; or

22   any other indicative means employed in computer interfaces.

23   [00037] The connotative and denotative meanings of words and phrases can be tabulated

24   and used to expand a keyword list, presented by the user to describe his or her experience

25   with an advertisement, so that a larger, more inclusive list is generated. For the purposes

26   of this specification, an expanded list can be described alternatively as a list of terms

27   synonymously related to one another. To generate an expanded list or list of synonyms,

28   such data as is contained in "Partridge's Concise Dictionary of Slang and Unconventional

29   English," Macmillan Publishing Company, New York, (1984 edition), and/or "Roget's

1   International Thesaurus," Robert L. Chapman (Editor), HarperCollins, (1992 edition) can

2   be used.

3   [00038] The database can be input, updated and/or modified by a database administrator,

4   an advertiser or the advertiser's agent or media outlet, or experientially using the search

5   engine. Furthermore, the database can reside on a server or locally at the user interface.

6   The search engine algorithm can be similar to those used on the Internet such as might be

7   provided by Google, Lycos or AltaVista; free-form or query-based using deductive

8   reasoning in a manner similar to that used in the game "Twenty Questions;" query or free-

9   form input based using abductive reasoning as described in US patent number 5,812,994,

10   incorporated herein by reference, fuzzy logic searching, described in references such as

11   Jerry M. Mendel, "Uncertain Rule-Based Fuzzy Logic Systems: Introduction and New

12   Directions," (Prentice-Hall, 2000) or can be any other algorithm that uses search and/or

13   sorting techniques described in standard references such as Donald E. Knuth, "The Art of

14   Computer Programming Vol. 3," (Addison-Wesley Publishing, Co. 1973). A person

15   skilled in the art will recognize that the database can be searched using a simple

16   sequential search, a hierarchical search or other searching algorithms. Alternatively, the

17   database directory can be implemented as a hash table with hash computations operable

18   to locate a block of data in the directory. In addition, combinations comprising a plurality

19   of search techniques can be employed. For example, a search using query-based

20   deductive reasoning can be used in combination with a keyword search to yield a subset

21   of the advertisement database. As another example, a search using abductive reasoning

22   can be applied initially, followed by a deductive keyword search of the inferential

23   hypotheses generated by the abducer to yield a subset of the advertisement database.

24   [00039] Results can be reported to the user via a standard display interface such as a

25   video screen, a Braille interface, a voiced interface using real, recorded or synthesized

26   voice, or any other indicative means.

27   [00040] Search results can be in the form of contact information to enable the user to

28   contact the advertiser or the advertiser's designee, a synopsis of the advertisement, a copy

1 of the advertisement, a replay of the advertisement, or a recitation any portion of the

2 advertisement copy. In addition, combinations of the above can be supplied.

3 [00041] In iterative searches, results are indexed with a unique identifier denoting each

4 of several unique lists of search terms. Such results can, for example, be used to map

5 demographic audiences, targeted in each iteration, to the corresponding search results so

6 that the advertiser can evaluate his or her advertising coverage or that of his or her

7 competitor.

8 BRIEF DESCRIPTION OF THE DRAWINGS

9 [00042] Crossed lines do not indicate connection. Collinear segments indicate input to

10 the same point or output from the same point. Arrowheads pointing into an element

11 indicate input whereas arrowheads pointing away from an element indicate output.

12 [00043] Figure 1 shows a schematic outlining the most basic concept of the invention.

13 [00044] Figure 2 shows an embodiment of invention in which information is input by the

14 user based on queries form the advertisement retrieval system. Either a plurality of results

15 or a single result is communicated to the user, depending on whether the input data

16 defines an advertisement uniquely.

17 [00045] Figure 3 is the same as Figure 2 except that multiple results are input to a second

18 search engine represented in Figure 4.

19 [00046] Figure 4 represents a second search engine when the output from the search of

20 Figure 3 does not produce a unique result. Input to Figure 4 is the non-unique result from

21 the search of Figure 3 and a list of keywords entered by the user.

22 [00047] Figure 5 is the same as Figure 4 except that the input keyword list is expanded to

23 comprise the original keywords and synonyms derived from the original list.

24 [00048] Figure 6(A-H) represents an interactive session in which the user is seeking

25 information about a pharmaceutical product.

1   DETAILED DESCRIPTION

2   [00049] Figure 1 shows the basic design for this invention. Shown are (1) an

3   advertisement database comprising data about a plurality of advertisements, (2) a user

4   interface with an input portion and an output portion, (3) a search engine, capable of

5   accepting input from the user, querying the advertisement database and (4) reporting a

6   single result or a plurality of results to the user via the user interface wherein the results

7   comprise a subset of the advertisement database.

8   [00050] Figure 2 shows this invention with the search engine implemented to eliminate

9   from consideration in an iterative fashion those advertisement records that do not meet

10   the search criteria. As before, Figure 2 shows, (1) the advertisement database and (2) the

11   user interface. Data from (1) are copied initially into (5) an ad list buffer. The user is

12   queried by (6) for an input rule, which is then passed to (7) a decision point. If the rule,

13   input by the user, can eliminate one or more records in the ad list buffer, a command is

14   passed to (8), which deletes items based on the input rule. If the rule, input by the user,

15   can not eliminate a record in the ad list buffer, a command is passed to (11), which

16   increments an index denoting the number of questions that have been asked, generates a

17   new question based on the data in the ad list buffer and passes the new question back to

18   (6), which reinitiates the process with a new query to the user. Once at least one record is

19   deleted from (5) by (8), a query is made by (9), a decision point, to determine whether

20   there is only one item left in the ad list buffer. If so, a single result has been generated.

21   That result is communicated by (10) to the user interface and passed to the user. If not, an

22   argument is communicated to (12) another decision point, which determines whether

23   there are no further questions to be asked of the user. If there are no further questions,

24   (13) passes the remaining results to the user via the user interface, (2). If there are more

25   questions to be asked, a command is passed to (11), which increments an index denoting

26   the number of questions that have been asked, generates a new question based on the data

27   in the ad list buffer and passes the new question back to (6). Thus, the process is iterated

28   until a single record remains in the ad list buffer or there are no further questions.

1   [00051] Figure 3 is similar to Figure 2 except that the multiple results are not reported to

2   the user at (13). The process, (14), requests from the user, a free-form keyword via the

3   user interface. The new keyword is passed to the process of Figure 4.

4   [00052] The process of figure 4 uses keywords entered in freeform at (14) that is tested

5   to determine whether it matches any of the items in (15) the redacted ad list buffer. The

6   output of (14) is first passed through (16) a decision point that determines whether all of

7   the keywords from (14) have been exhausted. If there are no keywords pending, the

8   contents of (15) are passed to (23) and reported to the user via the user interface. If at

9   least one keyword is pending, it is passed to (17) a decision point which queries whether

10   the pending keyword matches any of the items in the ad buffer. Upon finding one or

11   more matches, the redacted ad list buffer (15) is redacted further by removing those

12   advertisement records that do not match the pending keyword. If (17) determines that no

13   match with the pending keyword was found, a new keyword is requested at (14). The

14   process of (18) passes to (19) a decision point that determines whether the ad list buffer

15   contains a single item. If the ad list buffer contains a single item, the result is reported by

16   (22) to the user via the user interface. If no items or more than one item is contained in

17   the ad list buffer, control is passed to (20) a decision point which determines whether the

18   redacted ad list buffer is empty. If the redacted ad list buffer is empty, control is passed

19   to (21) which restores the redacted ad list buffer to its condition prior to testing by the last

20   keyword and then passes control to (14). If at (20) the redacted ad list buffer contains

21   more than one item, control is passed to (14). Thus, the process is iterated until a single

22   record remains in the redacted ad list buffer or there are no further keywords from the

23   user. Elements 16-20 of Figure 4 make up the first search engine (100).

24   [00053] Figure 5 is similar to Figure 4 except that the input of a keyword at (14) passes

25   control to (24) which expands the input of each keyword, if possible, to include the

26   original keyword and its synonyms. Thus, the process of Figure 5 is iterated until a single

27   record remains in the redacted ad list buffer or there are no further keywords or synonyms

28   to be tested. Elements 16-20 of Figure 5 make up the second search engine (110).

1 [00054] Figure 6 is similar to Figure 4 except that (25) requests search terms that are

2 targeted at a single demographic group or a subset of the demographic universe and that

3 the process is begun with the full ad list buffer (5) initially comprising all of the records

4 in the entire advertisement database.

5 [00055] Figure 7 A-H describes an interactive session with the advertisement retrieval

6 program. The underlying algorithm for this session is that described in Figures 3 and 4.

7 Figure 7(A) shows that the program makes no assumptions about the contents of the

8 advertisement experienced by the user. In fact, the user need not even remember the

9 name of the product or service. Figure 7(B) provides a basis for eliminating from

10 consideration all of the advertisements in the database except those presented on

11 television. Figure 7(C) indicates that the user further eliminates from consideration all

12 messages such as talk shows or interviews that were not presented as a commercial.

13 Figure 7(D) indicates that the advertised product is for personal use, thus eliminating

14 from consideration all advertisements for the home, for business, for travel or for vehicle

15 related products. Figure 7(E) indicates that the product is a prescription medication, thus

16 eliminating all items that are not prescription medications. Figure 7(F) requests free-form

17 input from the user indicating that the medication is for relieving pain from arthritis and a

18 salient detail about the ad, namely, that a woman was "climbing stairs and walking fast."

19 Figure 7(G) indicates that the system now has sufficient information to suggest the

20 contents of a single result, which is recognized by the user. Figure 7(H) reports the single

21 result to the user in the form of contact information.

22 EXAMPLES

23 [00056] Example 1. In this hypothetical example, Fred has arthritis in his knees and in

24 his shoulder to the extent that he finds it difficult to drive his car to work. One weekend

25 afternoon, while he was napping on his living room couch a commercial on television

26 described a new, highly effective arthritis medication called "DueRelief," which was

27 advertised as a prescription medicine. Fred was able to recall only bare details about the

28 advertisement. Fred had seen advertisements for other prescription medications before

29 and had requested them from his physician only to find that the previously advertised

21

1 medications were not right for him. The only mention of side effects in the advertisement

2 indicated that DueRelief might cause abdominal pain. Armed with very little

3 information, Fred was able to enter the advertisement retrieval system, answer a few

4 simple questions and obtain the contact information he needed for the makers of

5 DueRelief. He went to the website of International Remedy Pharmaceutical Corporation

6 where he was able to find that DueRelief was contraindicated for those patients who had

7 recently been exposed to chicken pox or shingles or had alcoholic liver disease but was

8 otherwise safe and effective. Since Fred had not recently been exposed to chicken pox or

9 shingles and only drank alcohol occasionally, it appeared that DueRelief might be a good

10 choice for him. Fred consults his physician.

11 [00057] Example 2. An advertising campaign shows a particularly attractive automobile

12 but explicitly and intentionally does not supply sufficient information to consummate a

13 purchase. The customer must be out of the country for several weeks and is concerned

14 that upon her return the ad campaign will have run its course and she will not have

15 sufficient information to buy the automobile. Upon entering the advertising retrieval

16 system, she is able to enter what she can remember about the ads seen in the ad campaign

17 until the present time. The advertising retrieval system recovers contact information

18 about the advertisement but does not deliver it immediately in keeping with the spirit of

19 the advertising campaign. Rather, the company sends the customer an electric mail

20 message when it is ready to divulge the desired contact information.

21 [00058] Example 3. A small storeowner features various items at a reduced price each

22 week. He has a limited advertising budget and wants to make his advertisements as

23 productive as possible. While he believes that people pay little attention to advertising at

24 the time an advertisement is presented, he is also convinced that people who follow

25 through by making the effort to use the advertising retrieval system are more strongly

26 motivated to buy the advertised products. The storeowner pays to have his ads listed on

27 the advertisement retrieval system before they run so that customers can search for his ads

28 at their leisure.

1   [00059] Those skilled in the art will realize that various modifications, adaptations and

2   alterations to the present invention are possible in light of the above teachings. It should

3   therefore be understood at this time that, within the scope of the appended claims, the

4   invention may be practiced otherwise than was described specifically hereinabove. For

5   example, although the search engine described above is readily implemented in software,

6   the invention does not exclude the possibility of implementing the search engine in

7   hardwired form or in a combination of software and hardwired logic.

1   What is claimed is:

2   1. A method of supplying advertisement information to a user searching for

3   said information within a data network, comprising the steps of: receiving,

4   from the user, a series of search rules comprising facts about an

5   advertisement; accessing a database comprising details of a plurality of

6   advertisements; using a search engine to apply said search rules to said

7   database; and reporting, to the user, results comprising a subset of the

8   contents of said database.

9   2. The method of claim 1 wherein the user experienced said advertisement

10   previously.

11   3. The method of claim 1 wherein the data network comprises the Internet.

12   4. The method of claim 1 wherein the algorithm of said search engine is

13   selected from a group consisting of deductive reasoning, fuzzy logic and

14   abductive reasoning.

15   5. The method of claim 1 wherein said advertisement information comprises

16   contact information.

17   6. The method of claim 1 wherein said user is a customer.

18   7. The method of claim 6 wherein the customer experienced said advertisement

19   previously.

20   8. The method of claim 6 wherein the data network comprises the Internet.

21   9. The method of claim 6 wherein the algorithm of said search engine is

22   selected from a group consisting of deductive reasoning, fuzzy logic and

23   abductive reasoning.

24   10. The method of claim 6 wherein said advertisement information comprises

25   contact information.

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1   11. A method of supplying advertisement information to a user searching for
2   desired information within a data network, comprising the steps of: querying
3   the user to obtain one or more search rules comprising facts about an
4   advertisement; accessing a database comprising details of a plurality of
5   advertisements; using a first search engine to apply said search rules to said
6   database to obtain results comprising a first subset of the contents of said
7   database; receiving from the user one or more keywords; using said
8   keywords and a second search engine to query said first subset; and
9   reporting, to the user, results comprising a second subset of the contents of
10   said database, wherein said second subset is smaller than said first subset.

11   12. The method of claim 11 wherein said user experienced said advertisement
12   previously.

13   13. The method of claim 11 wherein the data network comprises the Internet.

14   14. The method of claim 11 wherein the algorithm of said first search engine is
15   selected from a group consisting of deductive reasoning, fuzzy logic and
16   abductive reasoning.

17   15. The method of claim 11 wherein the algorithm of said second search engine
18   is selected from a group consisting of deductive reasoning, fuzzy logic and
19   abductive reasoning.

20   16. The method of claim 11 wherein the algorithm of said first search engine is
21   the same as the algorithm of said second search engine.

22   17. The method of claim 11 wherein said advertisement information comprises
23   contact information.

24   18. The method of claim 11 wherein said user is a customer.

25   19. The method of claim 18 wherein said customer experienced said
26   advertisement previously.

1   20. The method of claim 18 wherein the data network comprises the Internet.

2   21. The method of claim 18 wherein the algorithm of said first search engine is
3   selected from a group consisting of deductive reasoning, fuzzy logic and
4   abductive reasoning.

5   22. The method of claim 18 wherein the algorithm of said second search engine
6   is selected from a group consisting of deductive reasoning, fuzzy logic and
7   abductive reasoning.

8   23. The method of claim 18 wherein the algorithm of said first search engine is
9   the same as the algorithm of said second search engine.

10   24. The method of claim 18 wherein said advertisement information comprises
11   contact information.

12   25. A method of supplying advertisement information to a user searching for
13   desired information within a data network, comprising the steps of: querying
14   the user to obtain one or more search rules comprising facts about an
15   advertisement; accessing a database comprising details of a plurality of
16   advertisements; using a first search engine to apply said search rules to said
17   database to obtain a plurality of results comprising a first subset of the
18   contents of said database; receiving, from the user, a first list of keywords;
19   generating a second list of keywords, said second list comprising keywords
20   or phrases synonymously related to one or more keywords or phrases in said
21   first list; using said second list and a second search engine to query said first
22   subset; and reporting, to the user, results comprising a second subset of the
23   contents of said database, wherein said second subset is smaller than said
24   first subset.

25   26. The method of claim 25 wherein said user experienced said advertisement
26   previously.

27. The method of claim 25 wherein the data network comprises the Internet.

28. The method of claim 25 wherein the algorithm of said first search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

29. The method of claim 25 wherein the algorithm of said second search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

30. The method of claim 25 wherein the algorithm of said first search engine is the same as the algorithm of said second search engine.

31. The method of claim 25 wherein said advertisement information comprises contact information.

32. The method of claim 25 wherein said user is a customer.

33. The method of claim 32 wherein said customer experienced said advertisement previously.

34. The method of claim 32 wherein the data network comprises the Internet.

35. The method of claim 32 wherein the algorithm of said first search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

36. The method of claim 32 wherein the algorithm of said second search engine is selected from the group consisting of deductive reasoning, fuzzy logic and abductive reasoning.

37. The method of claim 32 wherein the algorithm of said first search engine is the same as the algorithm of said second search engine.

38. The method of claim 32 wherein said advertisement information comprises contact information.

39. A method of facilitating demographic research by supplying advertisement information to a user searching for information within a data network, comprising the steps of: receiving a set of search terms comprising words having targeted connotative significance to a particular demographic segment; accessing a database comprising details of a plurality of advertisements; using a search engine to apply said search terms to said database; and reporting results comprising a subset of the contents of said database.

40. The method of claim 39 wherein said user is an advertiser.

41. The method of claim 39 wherein the algorithm of said search engine is selected from a group consisting of deductive reasoning, abductive reasoning and fuzzy logic.

42. A method of performing demographic analysis of advertisements, comprising the steps of: (a) receiving a list of search terms comprising words having connotative significance to a targeted demographic segment; (b) accessing a database comprising details of a plurality of advertisements; (c) using a search engine to apply said list of search terms to said database; (d) reporting results of the search comprising a subset of the contents of said database, said results being indexed uniquely; and (e) repeating steps (a) – (d) a number of times with at least one different search term in said list, said number being sufficient to cover the desired demographic space.

43. The method of claim 64 wherein the algorithm of said search engine is selected from a group consisting of deductive reasoning, abductive reasoning and fuzzy logic.

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1   ABSTRACT OF THE DISCLOSURE

2   This invention relates to a method of retrieving stored information about advertisements,

3   presented in any medium, the use of the method for the purpose of response facilitation

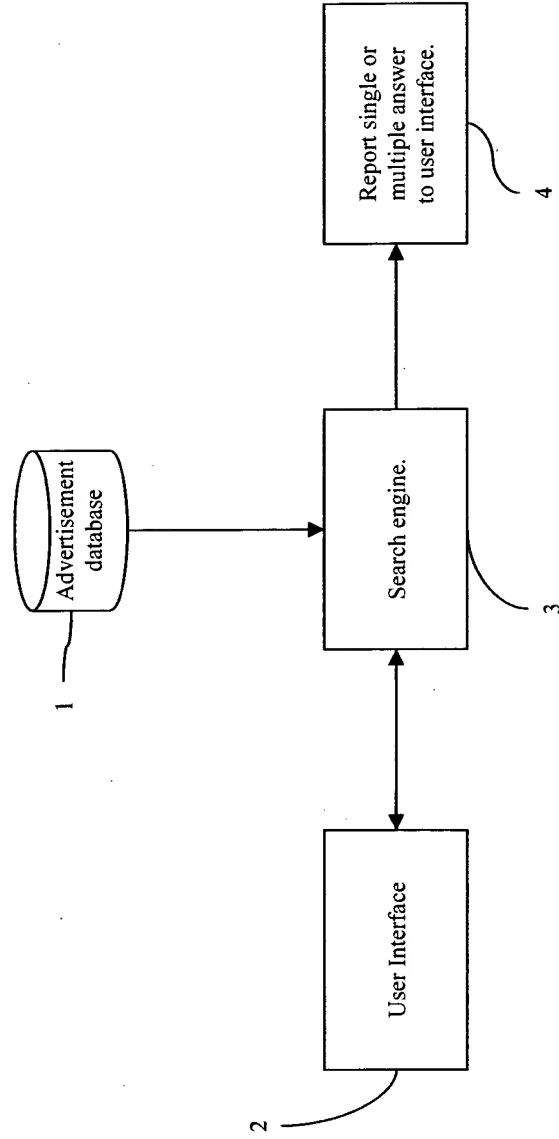4   and the use of the method for the purpose of performing demographic research.
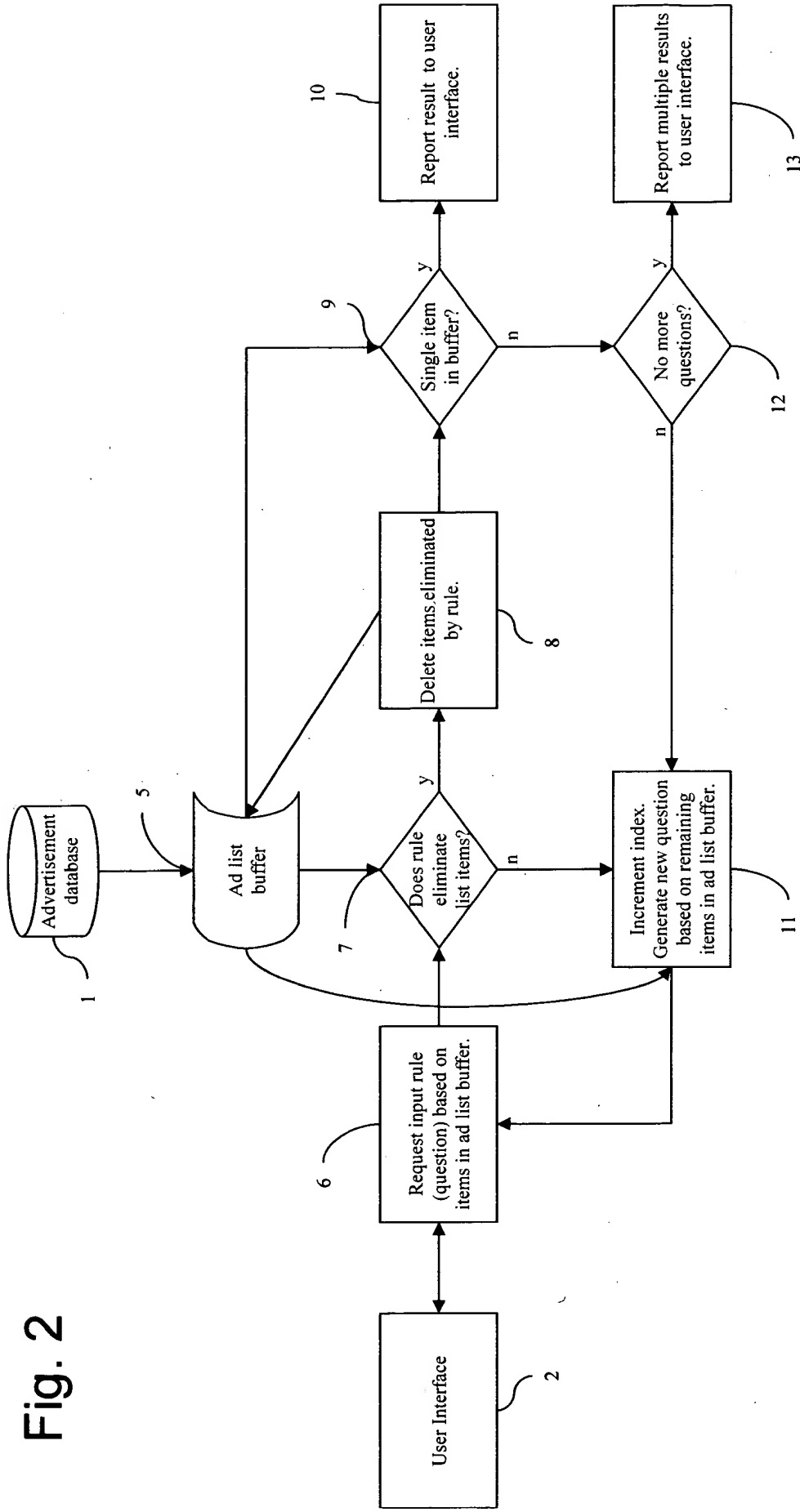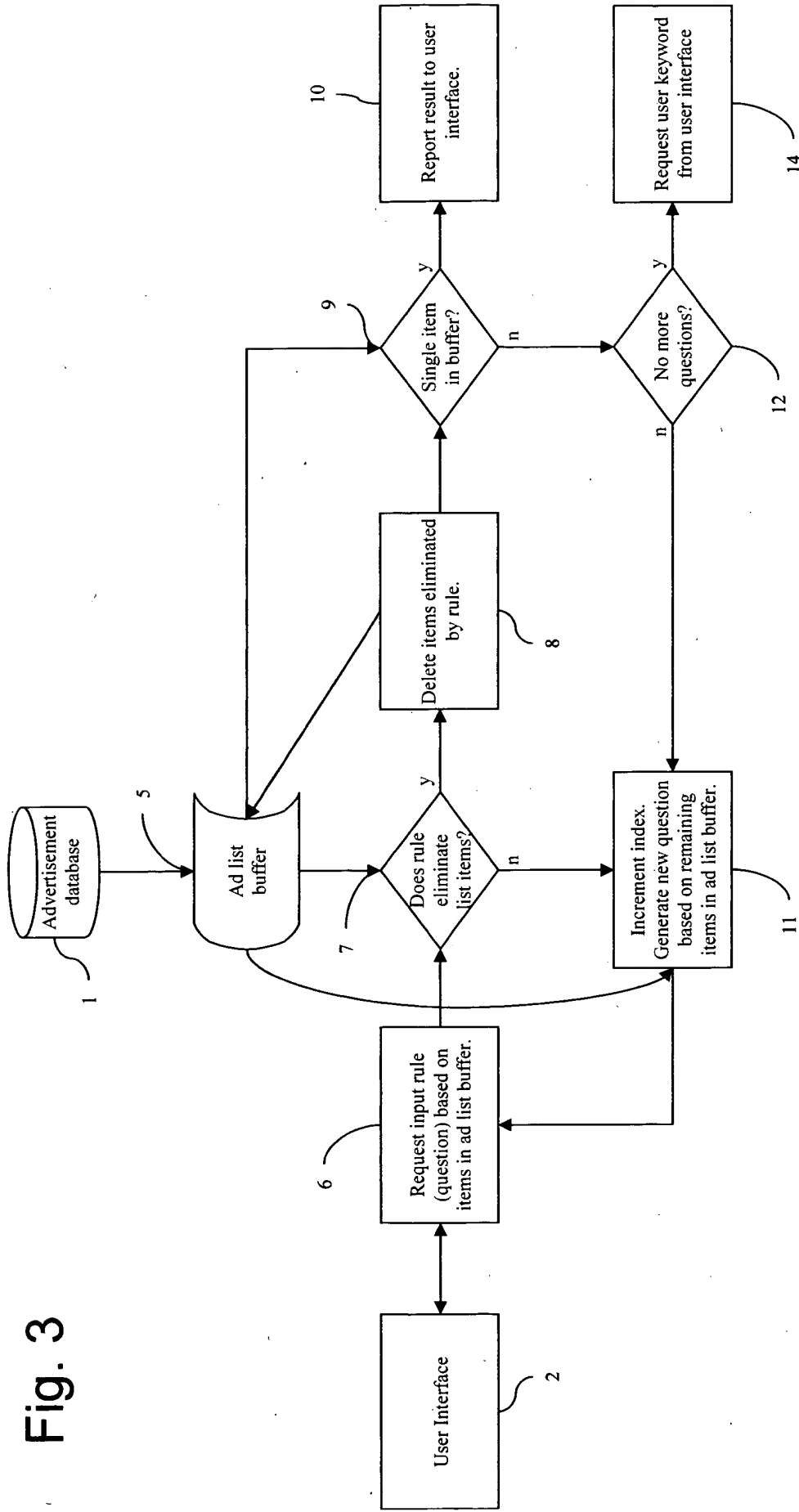
Fig. 1

Fig. 2

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Fig. 3

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Fig. 4 (As Amended)

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Fig. 5 (As Amended)

14 — Request keywords from user interface.

24 — Expand keyword list to include entered keywords and synonyms.

16 — No more keywords?
- y
- n

15 — Redacted ad list buffer.

17 — Keywords match items in ad buffer?
- y
- n

18 — Delete items that do not match with keywords.

19 — Single item in ad buffer?
- y
- n

20 — No items remaining in ad buffer?
- y
- n

21 — Restore redacted ad list buffer to prior condition.

22 — Report result to user interface.

23 — Report multiple results to user interface.

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Fig. 6

Report multiple results to user interface. 23

Report result to user interface. 22

Single item in ad buffer? 19

No items remaining in ad buffer? 20

Delete items that do not match with keywords. 18

Ad list buffer. 5

Keywords match items in ad buffer? 17

Restore redacted ad list buffer to prior condition. 21

No more keywords? 16

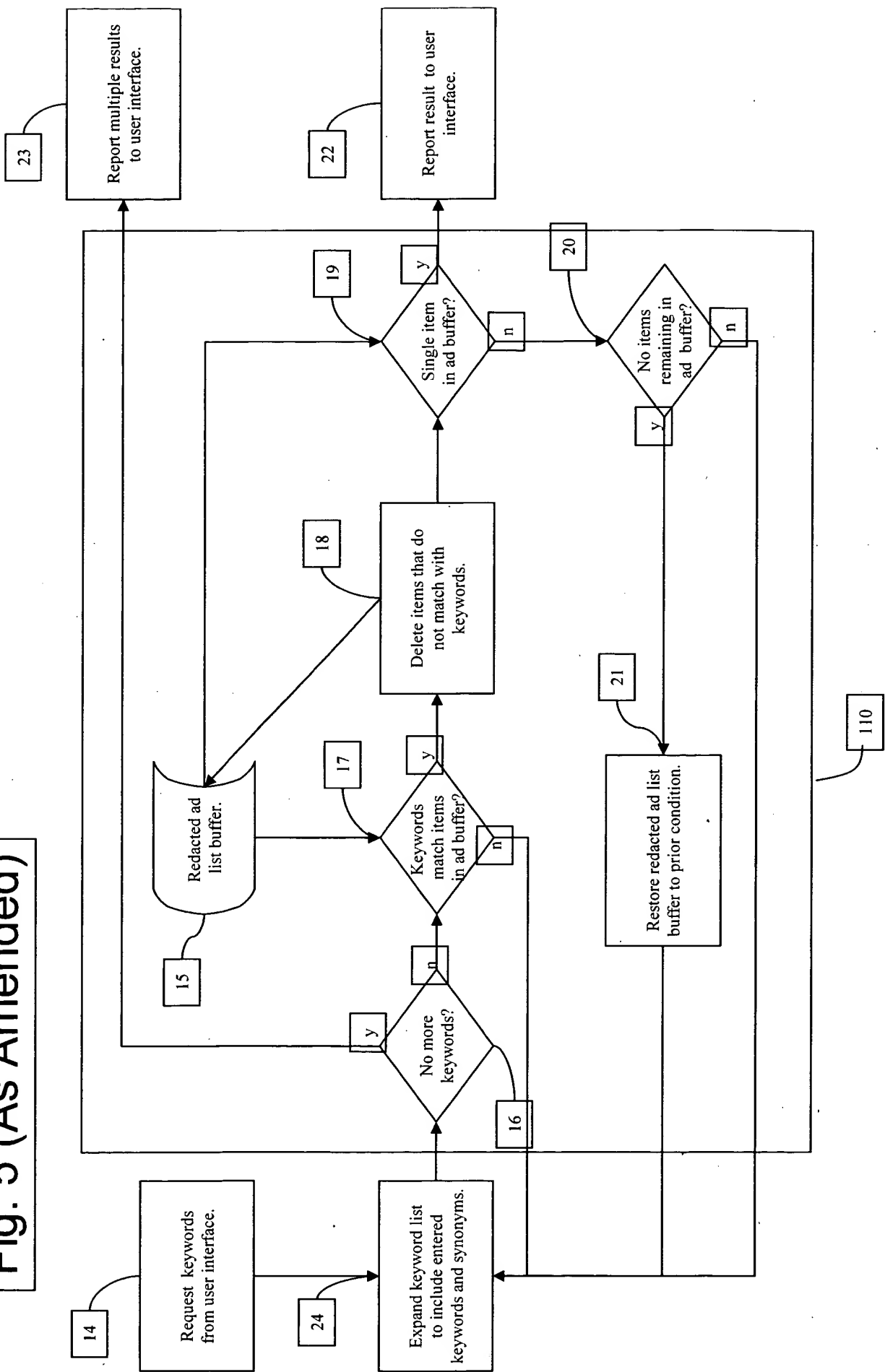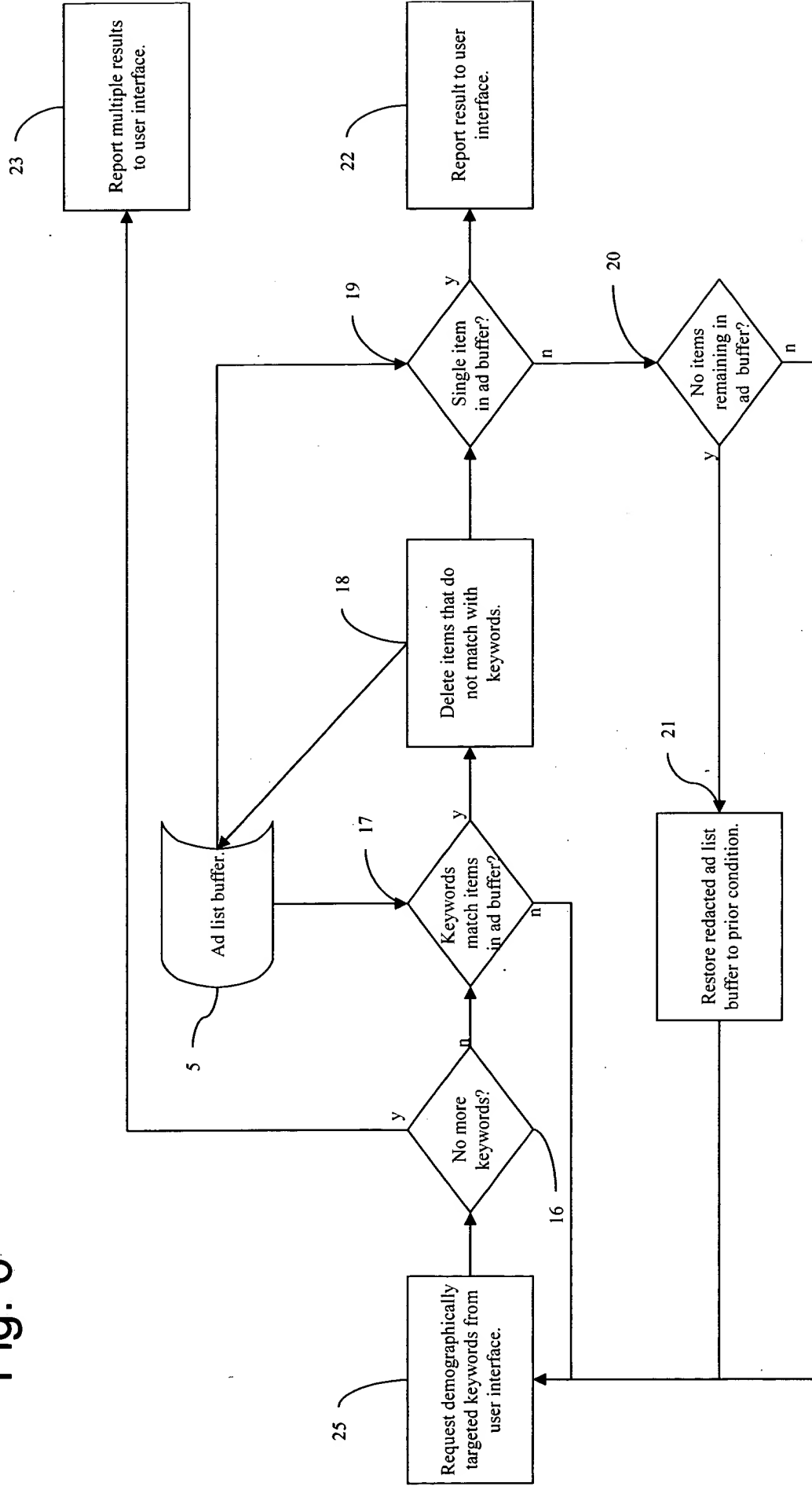Request demographically targeted keywords from user interface. 25

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Fig. 7

A

Consumer Retrieval Form

Do you recall the name of the product or service?

- **No (it's OK!)**
- **Yes**

continue

B

Consumer Retrieval Form

I am looking for an advertisement I saw or heard:

- on the Radio
- **on the Television**
- on an Outdoor Billboard
- in a Newspaper
- in a Magazine
- Other

continue

C

Consumer Retrieval Form

What type of advertisement was it?

- **Commercial**
- Interview – Talk Show

continue

D

Consumer Retrieval Form

The product or service advertised was:

- **for Personal Use**
- for the Home
- a Vehicle or Vehicle Related
- for Travel
- for a Business

continue

Fig. 7 (Continued)

Consumer Retrieval Form

The Personal Use product or service advertised was:

- Clothing, Jewelry or Watch
- **Prescription Medication**
- Over-the Counter Remedy, Vitamin, Diet, Cosmetic, Diet, Hair Care, etc,
- Fitness or Equipment
- Retail Store (of any type)
- Tobacco or Alcohol
- Television Service
- Amusement or Event
- Food or Food Product
- Shampoo, Deodorant, Soap or Other Grooming Supply
- Technology, Computer Hardware/Software, or Office Equipment
- Hospital or Medical Clinic
- Games, Toys, Hobby, Craft (not software)
- Other

continue

E

Consumer Retrieval Form

Enter what you do remember about the ad for Prescription Medication?

It may relieve my arthritis and help reduce the pain and stiffness in my knee and shoulder. A woman was climbing stairs and walking fast.

continue

F

Fig. 7 (Continued (2))

Consumer Retrieval Form

Is this the ad you saw?

"If you suffer from pain, stiffness and inflammation caused by osteoarthritis, DueRelief™ can help. It's the #1 brand of prescription pain medicine.

Huge clinic studies show that DueRelief™ may cause indigestion, and abdominal pain...

G

● No

● Yes
Retrieve the Ad's Contact Information.

Consumer Retrieval Form

Here is the Ad's Contact Information.

International Remedy Pharmaceutical Corporation

**77 Sunset Lane
Rock Harbor, California 95032
213-555-7777**

duerelief@irpcorp.com
www.duerelief/prodinfopage/consumer/irpcorp.com

H

Send to a Friend!